



REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

1 OGGTGTGCC GGGCTCAGCC CGCTCTCCTC CTCTTGCTCC CTGGGCGGG
 51 OGGGGTGAC TGTGCAACCGA CGTGGGCGGG CGCTGCAACCG CGCGTGGC
 101 CGGCCCCGCA GCAATGGCCAC CAOOGCCACC TGCACCCCGIT TCACOGAOGA
 151 CTACCAAGCTC TTGGAGGAGC TTGGCAAGGG TGCTTTCTCT GTGGTCGCGA
 201 GGTGTGTGAA GAAAACCTCC ACGCAGGAGT ACGCAGGAAA AATCATCAAT
 251 ACCAAGAAAT TGTCTGCGCG GGATCACCAG AACTAGAAC GTGAGGCTCG
 301 GATATGTGGA CTTCTGAAAC ATGAAACAT CGTGCGCTC CATGACAGTA
 351 TTTCGAAAGA AGGGTTTCAC TAOCTGTTG TTGACCTTGT TACGGGCGGG
 401 GAGCTGTGTTG AAGACATTGT GGCGAGAGAG TACTACAGTG AAGCAGATGC
 451 CAGCGACATGT ATACATCAGA TTCTGGAGAG TGTTAACAC ATGCCACAGC
 501 ATGACATOGT CCACAGGGAC CTGAAAGCCCTG AGAAACCTGCT GCTGGGAGT
 551 AAAATGCAAGG GTGCGCGCGT CAAGCTGGCT GATTTTGGCC TAGCCATOGA
 601 AGTACAGGGG GAGCACCGAG CTGGGTTGG TTTTGCTGCG ACCOCAGGIT
 651 ACTTGTGCCCC TGAGGTGCTTG AGGAAAGATC CCTATGGAAA ACCTGTGGAT
 701 ATCTGGGCGCT CGGGTGCAT CCTGTTATATC CTCTGGTGG GCTATCCTCC
 751 CTTCTGGGAT GAGGATCAGC ACAAGCTGTA TCAGCAGATC AAGGCTGGAG
 801 CCTATGATTT CGCCTACCA GAATGGGACA CGTAACTCC TGAAGCCAAG
 851 AACCTGATCA ACCAGATGCT GACGATTAAC CGAGCAAAGC GCATCAOGC
 901 TGACCGGGCT CTCAGGCAAC CGTGGGCTTG TCAACGATCC ACGGTGGCAT
 951 CCATGATGCA TGTGAGGAG ACTGTGGAGT GTTGGCGAA GTCAATGCC
 1001 CGGAGAAAAC TGAACGGTGC CATCCTCAOG ACCATGCTTG TCTCCAGGA
 1051 CTTCTCAGTT GGCAGGCAGA GCTTGGGCGCG CGCTCGCGT GCGGGAGCG
 1101 CGCGCGGCT GGCGGGCGAA GCTGCCAAAA GCTTATTGAA CAAGAAGTCG
 1151 GATGGGGGTG TCAAGAAAAG GAAGTGGAGT TCCAGOGIGC ACCTAATGGA
 1201 GGCACAAACC ACTGTGGTAC ACAACGCTAC AGATGGGATC AAGGCTCCA
 1251 CAGAGAGCTG CAACACCAAC ACAGAAGATG AGGACCTCAA AGCTGGCGCG
 1301 CTCGGCACTG GGAATGGCAG CTGGGTGCGT GAAGGACCGA GCTCGGGGA
 1351 CAGAACAGCC COCTCTGCG GCAATGCAAC CGAGCTCTCT CTCTGCTCT
 1401 CAGCCATGCG AAAACAGGGAG ATCAATTAAGA TTACAGAACCA GCTGATTGAA
 1451 GGCATCAACA ATGGGACAT TGAGGCGTAC ACGAAGATTG GTGATCGAG
 1501 CCTCACTTCC TTGAGGCGTGG AGGCGCTTGG TAACCTCGTG GAGGGATGG
 1551 ATTTCCATAA GTTGTACTTT GAGAATCTCC TGTCGAGAA CAGCAAGCT
 1601 ATCCATACCA CCATCTAAA CCACACAGTC CAAGTGAATG GGGAGGAOGC
 1651 AGGGTGCATC GCTACATOC GCGTCACCCA GTACATGAC GGGCAGGGTC
 1701 GGCGTGCAC CAGOCAGTC GAAAGAGACCC GGGTCTGGCA CGTOGGGGAT
 1751 GGCAAGTGGC TCAATGTCG CTATCACTGC TCAGGGGCGC CTGCGACCC
 1801 GCTGAGTGA GCTCGCCAC AGGGCTTTA GGAGATTCGA CGGGAGGTC
 1851 CAACCTCGC AGOCAGTGGC TCTGGAGGGC CTGAGTGAAC GGGCAGTCC
 1901 TGTGTTGTTG AGGTTAAAAA CAATCAATT ACAAAAGGG CAGCAGCCAA
 1951 TGCACGCCCG TGCATGCAAGC CCTCCCGCC CGCCCTCGTG TCTGTCCTG
 2001 CTGTACCGAG GTGTTTTTA CATTTAAGAA AAAAAAAA AAAAAAAA
 2051 AAAAAAAA A (SEQ ID NO:1)

FEATURES:

5'UTR: 1-112

Start Codon: 113

Stop Codon: 1808

3'UTR: 1811

Homologous proteins:

Top 10 BLAST Hits

	Score	E
CRA 88000001156376 /altid=gi 7434378 /def=pir JC5636 Ca2+/calm...	1083	0.0
CRA 18000004937293 /altid=gi 125289 /def=sp P11730 K00G_RAT CAL...	1066	0.0
CRA 18000005054755 /altid=gi 1657464 /def=gb AAC48714.1 (U7297...	1038	0.0
CRA 105000014644765 /altid=gi 10443740 /def=gb AAG17558.1 AF233...	994	0.0
CRA 105000014644764 /altid=gi 10443738 /def=gb AAG17557.1 AF233...	989	0.0
CRA 18000004903800 /altid=gi 422770 /def=pir A46619 Ca2+/calmo...	986	0.0
CRA 18000005152785 /altid=gi 3241847 /def=dbj BAA28869.1 (D149...	986	0.0
CRA 18000004937876 /altid=gi 631810 /def=pir S43845 Ca2+/calmo...	985	0.0
CRA 18000004937877 /altid=gi 560653 /def=gb AAB30671.1 (S71571...	984	0.0
CRA 105000014644762 /altid=gi 10443734 /def=gb AAG17555.1 AF233...	976	0.0

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BLAST dbEST Hits:

	Score	E
gi 12893350 /dataset=dbest /taxon=960...	1778	0.0
gi 12790010 /dataset=dbest /taxon=960...	1463	0.0
gi 10142161 /dataset=dbest /taxon=96...	1443	0.0
gi 10158540 /dataset=dbest /taxon=96...	1366	0.0
gi 12796371 /dataset=dbest /taxon=960...	1356	0.0
gi 12340179 /dataset=dbest /taxon=96...	1320	0.0
gi 9342125 /dataset=dbest /taxon=960...	1185	0.0
gi 12386814 /dataset=dbest /taxon=96...	1180	0.0
gi 12421686 /dataset=dbest /taxon=96...	1172	0.0
gi 12886387 /dataset=dbest /taxon=960...	1063	0.0

EXPRESSION INFORMATION FOR MODULATORY USE:

library source (from BLAST dbEST hits):

gi|12893350 Placenta
gi|12790010 breast
gi|10142161 Skin melanotic melanoma
gi|10158540 Ovary adenocarcinoma cell line
gi|12796371 breast
gi|12340179 Uterus leiomyosarcoma
gi|9342125 Lymph Burkitt's lymphoma
gi|12386814 Small Intestine duodenal adenocarcinoma
gi|12421686 Breast mammary adenocarcinoma
gi|12886387 placenta

Tissue Expression:

Human fetal whole brain

FIGURE 1B

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1 MATTATCTRF TDDYQLFEEL GKGAFSVRR CVKKTSTQEQY AAKIINTKKL
 51 SARDHQKLER EARICRLLKH PNIVRLHDSI SEEGFHYLVF DLVIGGELFE
 101 DIVAREYYSE ADASHCIHQI LESVNHIHQH DIVHRDLKPE NLLASKCKG
 151 AAVKLADFGL AIEVQGEQQA WFGFAGTPGY LSPEVLRKDP YGKPVDIWAC
 201 GVILYILLVG YPPFWDEDQH KLYQQIKAGA YDFPSPEWDT VTPEAKNLIN
 251 QMLTINPAKR ITADQALKHP WVQRSTIVAS MMHQETVEC LRKFNARRKL
 301 KGAILTMLV SRNFSVGRQS SAPASPAASA AGLAGQAAKS LLNKKSDGGV
 351 KKRKSSSSVH IMEPQITVVH NATDGIKGST ESCNTTTEDE DLKAAPLRTG
 401 NGSSVPEGRS SRDRTAPSAG MQQPQLCSS AMRKQEIIKI TEQLIEAINN
 451 GDFEAYITKIC DPGLTSFEPE ALGNLVEGMD FHKFYFENLL SKNSKPIHTT
 501 IILNPVHVIG EDAACIAYIR LTOYIDGQGR PRTSQSEETR VWHRRDGKWL
 551 NVHYHCSGAP AAPLQ (SEQ ID NO:2)

FEATURES:

Functional domains and key regions:

[1] PDOC00001 PS00001 ASN_GLYCOSYLATION

N-glycosylation site

Number of matches: 4

1	313-316	NFSV	(residues 313-316 of SEQ ID NO:2)
2	371-374	NATD	(residues 371-374 of SEQ ID NO:2)
3	384-387	NTTT	(residues 384-387 of SEQ ID NO:2)
4	401-404	NGSS	(residues 401-404 of SEQ ID NO:2)

[2] PDOC00004 PS00004 cAMP_PHOSPHO_SITE

cAMP- and cGMP-dependent protein kinase phosphorylation site

Number of matches: 5

1	33-36	KKTS	(residues 33-36 of SEQ ID NO:2)
2	48-51	KKLS	(residues 48-51 of SEQ ID NO:2)
3	259-262	KRIT	(residues 259-262 of SEQ ID NO:2)
4	352-355	KRKS	(residues 352-355 of SEQ ID NO:2)
5	353-356	RKSS	(residues 353-356 of SEQ ID NO:2)

[3] PDOC00005 PS00005 PKC_PHOSPHO_SITE

Protein kinase C phosphorylation site

Number of matches: 3

1	47-49	TKK
2	51-53	SAR
3	410-412	SSR

[4] PDOC00006 PS00006 CK2_PHOSPHO_SITE

Casein kinase II phosphorylation site

Number of matches: 12

1	36-39	STQE	(residues 36-39 of SEQ ID NO:2)
2	51-54	SARD	(residues 51-54 of SEQ ID NO:2)
3	79-82	SISE	(residues 79-82 of SEQ ID NO:2)
4	94-97	TGGE	(residues 94-97 of SEQ ID NO:2)
5	109-112	SEAD	(residues 109-112 of SEQ ID NO:2)
6	385-388	TTTE	(residues 385-388 of SEQ ID NO:2)
7	386-389	TTED	(residues 386-389 of SEQ ID NO:2)
8	387-390	TEDE	(residues 387-390 of SEQ ID NO:2)
9	404-407	SVEE	(residues 404-407 of SEQ ID NO:2)
10	410-413	SSRD	(residues 410-413 of SEQ ID NO:2)
11	465-468	TSEE	(residues 465-468 of SEQ ID NO:2)
12	534-537	SQSE	(residues 534-537 of SEQ ID NO:2)

[5] PDOC00008 PS00008 MYRISTYL

N-myristoylation site

FIGURE 2A

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Number of matches: 4

1 302-307 GAILTT (residues 302-307 of SEQ ID NO:2)
2 375-380 GIKGST (residues 375-380 of SEQ ID NO:2)
3 378-383 GSTESC (residues 378-383 of SEQ ID NO:2)
4 400-405 QNGSSV (residues 400-405 of SEQ ID NO:2)

[6] PDOC00100 PS00107 PROTEIN_KINASE_ATP
Protein kinases ATP-binding region signature

20-43 LGKGAFSVRRCVKKTSTQEYAAK (residues 20-43 of SEQ ID NO:2)

[7] PDOC00100 PS00108 PROTEIN_KINASE_ST
Serine/Threonine protein kinases active-site signature

132-144 IVHRDLKPENLLL (residues 132-144 of SEQ ID NO:2)

[8] PDOC00364 PS00402 BPD_TRANSP_INN_MEMBR
Binding-protein-dependent transport systems inner membrane comp. sign

405-433 VPEGRSSRDRAPSAGMQPQPSLCSSAMR (residues 405-433 of SEQ ID NO:2)

Membrane spanning structure and domains:

Helix	Begin	End	Score	Certainty
1	195	215	1.665	Certain
2	319	339	0.818	Putative

FIGURE 2B

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BLAST Alignment to Top Hit:

```
>CRA|88000001156376 /altid=gi|7434378 /def=pir||JC5636
    Ca2+/calmodulin-dependent protein kinase (EC 2.7.1.123)
    II gamma-E - human /org=human /taxon=9606 /dataset=nraa
    /length=556
    Length = 556

Score = 1083 bits (2771), Expect = 0.0
Identities = 534/577 (92%), Positives = 539/577 (92%), Gaps = 12/577 (2%)
Frame = +2

Query: 113 MATTATCTRFDDYQLFEELKGAFSVRRCVKKTSTQEYAAKIINTKKSARDHQKLER 292
        MATTATCTRFDDYQLFEELKGAFSVRRCVKKTSTQEYAAKIINTKKSARDHQKLER
Sbjct: 1 MATTATCTRFDDYQLFEELKGAFSVRRCVKKTSTQEYAAKIINTKKSARDHQKLER 60

Query: 293 EARICRLLKHPNIVRLHDSISEEGFHYLVFDLVIGGELFEDIVAREYYSEADASHCIHQI 472
        EARICRLLKHPNIVRLHDSISEEGFHYLVFDLVIGGELFEDIVAREYYSEADASHCIHQI
Sbjct: 61 EARICRLLKHPNIVRLHDSISEEGFHYLVFDLVIGGELFEDIVAREYYSEADASHCIHQI 120

Query: 473 LESVNHIHQDIVHRLKPNENLLASKCKGAAVKLADEFGLAIEVQGEQQAWFGFAGTPGY 652
        LESVNHIHQDIVHRLKPNENLLASKCKGAAVKLADEFGLAIEVQGEQQAWFGFAGTPGY
Sbjct: 121 LESVNHIHQDIVHRLKPNENLLASKCKGAAVKLADEFGLAIEVQGEQQAWFGFAGTPGY 180

Query: 653 LSPEVLRKDPYGKPVDIWACGVILYILLVGYPPFWDEDQHKLYQQIKAGAYDFPSPEWDT 832
        LSPEVLRKDPYGKPVDIWACGVILYILLVGYPPFWDEDQHKLYQQIKAGAYDFPSPEWDT
Sbjct: 181 LSPEVLRKDPYGKPVDIWACGVILYILLVGYPPFWDEDQHKLYQQIKAGAYDFPSPEWDT 240

Query: 833 VTPEAKNLINQMLTINPAKRITADQALKHPWVCQRTVASMMHRQETVECLRKENARRKL 1012
        VTPEAKNLINQMLTINPAKRITADQALKHPWVCQRTVASMMHRQETVECLRKENARRKL
Sbjct: 241 VTPEAKNLINQMLTINPAKRITADQALKHPWVCQRTVASMMHRQETVECLRKENARRKL 300

Query: 1013 KGAILITMLVSRNFSVGRQSSAPASPAASAAGLAGQAAKSLINKKSDGGVKRKSSSVH 1192
        KGAILITMLVSRNFS
        AAKSLINKKSDGGVK + + +
Sbjct: 301 KGAILITMLVSRNFS-----AAKSLINKKSDGGVKPQSNNKNSL 339

Query: 1193 L-----MEPQTIVVHNATDGIGKSTESCNNTTEDEDLKAAPLRTGNSSVPEG 1336
        +
        MEPQTIVVHNATDGIGKSTESCNNTTEDEDLKAAPLRTGNSSVPEG
Sbjct: 340 VSPAQEPAPIQTAMEPQTIVVHNATDGIGKSTESCNNTTEDEDLKAAPLRTGNSSVPEG 399

Query: 1337 RSSRDRTAPSAGMQPQPSLCSSAMRKQEIIKITEQLIFAINNGDFEAYTKICDPGLTSFE 1516
        RSSRDRTAPSAGMQPQPSLCSSAMRKQEIIKITEQLIFAINNGDFEAYTKICDPGLTSFE
Sbjct: 400 RSSRDRTAPSAGMQPQPSLCSSAMRKQEIIKITEQLIFAINNGDFEAYTKICDPGLTSFE 459

Query: 1517 PEALGNLVEGMDFHKFYFENLLSKNSKPIHTTILNPHVHIGEDAACIAYIRLTOYIDGQ 1696
        PEALGNLVEGMDFHKFYFENLLSKNSKPIHTTILNPHVHIGEDAACIAYIRLTOYIDGQ
Sbjct: 460 PEALGNLVEGMDFHKFYFENLLSKNSKPIHTTILNPHVHIGEDAACIAYIRLTOYIDGQ 519

Query: 1697 GRPRTSQSEETRVWHRDGKWLNVHYHCSGAPAAPLQ 1807 (SEQ ID NO:2)
        GRPRTSQSEETRVWHRDGKWLNVHYHCSGAPAAPLQ
Sbjct: 520 GRPRTSQSEETRVWHRDGKWLNVHYHCSGAPAAPLQ 556 (SEQ ID NO:4)
```

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Hmmr search results (Pfam):

Model	Description	Score	E-value	N
PF00069	Eukaryotic protein kinase domain	309.5	4.1e-89	1
CE00022	CE00022 MAGUK_subfamily_d	295.5	3.9e-87	1
CE00359	E00359 bone_morphogenetic_protein_receptor	14.8	0.0017	1
PF00534	Glycosyl transferases group 1	3.3	9.1	1
CE00031	CE00031 VEGFR	0.3	3.2	1
CE00292	CE00292 PTK_membrane_span	-59.7	1.5e-05	1
CE00287	CE00287 PTK_Eph_orphan_receptor	-63.5	0.00035	1
CE00291	CE00291 PTK_fgf_receptor	-90.9	0.0016	1
CE00286	E00286 PTK_EGF_receptor	-131.8	0.0056	1
CE00290	CE00290 PTK_Trk_family	-154.9	0.00012	1
CE00016	CE00016 GSK_glycogen_synthase_kinase	-180.4	1.2e-06	1

Parsed for domains:

Model	Domain	seq-f	seq-t	hm-f	hm-t	score	E-value
PF00534	1/1	31	65 ..	161	195 .]	3.3	9.1
CE00031	1/1	133	161 ..	1068	1093 ..	0.3	3.2
CE00359	1/1	132	186 ..	272	327 ..	14.8	0.0017
CE00286	1/1	14	252 ..	1	263 []	-131.8	0.0056
CE00290	1/1	15	253 ..	1	282 []	-154.9	0.00012
CE00291	1/1	14	267 ..	1	285 []	-90.9	0.0016
CE00292	1/1	14	267 ..	1	288 []	-59.7	1.5e-05
CE00287	1/1	14	270 ..	1	260 []	-63.5	0.00035
PF00069	1/1	14	272 ..	1	278 []	309.5	4.1e-89
CE00022	1/1	10	305 ..	13	316 ..	295.5	3.9e-87
CE00016	1/1	1	345 [.	1	433 []	-180.4	1.2e-06

FIGURE 2D

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1 TTGCOOCCTGG CCTGGTCTOC CTGATCAACC OGCGCTGAA GGGTTCTTCTT
51 CTAATAATGG COCTGGTGCCT TGCGCAAGTC TAGACITGICA CCTOCCAGAG
101 GGAAGGOGGC TGGCAGCTGG CTCTGOGCAG GCTGGGGGOG CCTCCCCGGC
151 GTCCAGOCCTG GCACAGGCTC CTGACCTTG GCTCTCTOCC CAAGTGCTAG
201 GACCOGGGTT GGGGGCTOGG GACCOGGGTT TAGGACCGT CCAGAGAGGT
251 CAGTGGTCCA GACTCTACA CTCTAACAC ATGCACCCCTC GCAITGCACT
301 TCCGAGGCC GOGCGGGGTC OGCGGGGGA CAAGGCCATA AGTGGGAAAC
351 CTTCCAGNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
401 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
451 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
501 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
551 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
601 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
651 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
701 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
751 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
801 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
851 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNN
901 NNNNNNNNNN NNNNNNNNNN NNNNNNTGAA GCGACGGGCG CGGGGGCGTC
951 TOGACATTAA ATTCAAAAT GTTTCTCG GTTTGTCACT TGTGGTTTA
1001 CTATGCTCAA TGCGCTCAC CAAGCAATT TGCAAAATAG TTAACTTATT
1051 CTCCTTTCTC TACATGACTT CTGACTTTG AGCCATAGT AGGAAAGGT
1101 TGCCTACTCT CACATTAGAG TAAATTTAT CCACATTCTC ATCTAGGATT
1151 AGTGTCAATT TTTTATATTAT TAATGAAATTC TTCTCATTT GGGGTTGTT
1201 CATGATATACT CCATGAACAA TGGAOGGGG TCCACATT TAGCATCAGC
1251 TATCCCTTC CCATCGGCA TGAGCTGGC GCTGCAGCAG CGGGGGGOC
1301 CCACCCOCAC CGOGGGGCGC GAGCGGGGC ACTGCGACOC CGGGGGGOC
1351 CGGGGGGGCA GAOGTITGCA GAGCTCAGAG TGCGAGCTCC CGTTGAGGG
1401 GGACCTCAAG GAAAATAGCA TGGAAGGGG AGTTCTGTAG GTCTGACTGT
1451 GTOCTCTCIT CCTTGTGCTG CAGTTGAGCC GGGATGCACT GAGATGAAC
1501 CGGCTGTGGG GGGGTTTGAG CCTCACTTG CCACATGGTT GAGGGAGATT
1551 TCTCTTTCAG GGGATGATAC CCTCTTTTA ATCTTCTCCTT CGGGACCTT
1601 CAGCTGTCTC TGCTGAGAGA AGGGCAGGGT CTCTCTGCTC CCTCTCTGOC
1651 TGGTCTCTT GGCGGGGAOC CGAGGGCTGT CTGAGATGCA CGAGGTGTG
1701 GTTTCTAGCA TOGCCAACCC CCTCTGTATG TGCGACCTGA GGTGGAGGCT
1751 GTGCGCTTGC CCAGGGACTG GATGAGGGGG TGGGAGGOG GCAOGCCACC
1801 CACATCTGTT CAGTGTCTG CGTGGGCCCC GTOCTTTGCTCCTCATGTTGG
1851 ATGGGGTGG TCACAGGOC CGTGTGCTG CTGAGCTGAG AGTGTGACTA
1901 GAGGCTCTGT GGTGGGAGCA TCATCGTOOC CAGACTGAA GTGTGCTCTG
1951 GTCACCTCTC CCTGCTCGT GTOCCAGITC TTTTCCCTT CTGCTCTCCAG
2001 GGGTGTCTTC TCTGTGGTGC CGAGGTGTGTA GAAGAAAAC TOCAOGCAGG
2051 AGTAOGCAGC AAAAATCATC AATAACCAAGA AATGTCCTGC CGGGGTGAG
2101 TGTTCCTCTGT CTGACCTCTC TCCGTAGGGT GCGTCCAGGG GCGATGGTTT
2151 CTTTGAGGA AGGCCAGGA ATGGGGGTT GTGCGTTTA GCACTTGGAG
2201 AGGAGTTGGA ATTTCAAGACT GGTGGACTT TGTCAGGC TGAAGGCCAGA
2251 AAAGGAGTTG CATGGGGAC TGGAAGGOC CAGGTACAAA AGAATGAAGG
2301 AAGAGATGCA AGTAGCTGCA GTGGGCCCCA AAGGCTCAAG GGAGTTGGT
2351 CTTCAGGGAG GTGGAGGATA TGGGGTAGT GGGTGTACA GAAAGGGCGAG
2401 CTCTTAATTCTT GGGGCAATTG GAGCGCTCTCC CTCTGGGCA GTGGCTGCTA
2451 CTGCAAGGCCCT TTGCTGGTGC CTCTCTCAAC ACGGGCTGAG TTAGAGTGG
2501 AATGCGAGTAA GTGAGGAGCT CTGACAAACCC CAGCGCTCCCG TGCGACCCAG
2551 GCGGCGAAC AGACTCCAA CGGAAGGGAA TCTGTAACAA TGAGGGGAGG
2601 CTGCTACTGG CGAGGGCTTC TCAGGGACAA ATTCGCGAG ATGAACTTGA
2651 TTGCTTTTGT GATCAATTAA CAAAGTTGTT GGTGGAGGCAG CAGATGTAGT
2701 CTGCTCTGGG TGAGGGTGA TGCTCTCATGG TCTGAAATC CCAAAGGOC
2751 GGTGTTGGCA GGAACITGCACT TGCTCTGGAA CTGCACTGCC TOCGAGTCTG
2801 AGGAGCATAAA AGGCCAGGC CTGGGGGCT CACTTGGAG ATCTCTCCAA
2851 GTACCTGAGG CTGGAGGGT CAGGGGCTGT CTTCACACCC TTGAACTTAC
2901 ACTCTCTGAA CTTCCTATTG GGTACTTGC AAACCTCACCT CATCTGATAG
2951 GTGTAGACCC AGCAATGTTG GAAAGTGTCT GGGAACAGGT CTGGTGTAGTA
3001 CAGAGGTCAG ATTCCTGGAGG CTGTCAGGGT CGACCTGGG GACAAAGGT

FIGURE 3A

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3051 GTGAAACTCA GAGAAAGGAA TTAGGGCTGG GCAGTAGGAT GCCATAATA
3101 TATTTGGAGC CAGGACACAT GOCCTGGGGA AGACATGGG TTTGGCCAAT
3151 AATGACAOGG GTTCTCTGG GATAAGAGAC ATAATAGATG TCCCAAATGC
3201 TTAGAGAAGC TCTACAAITC CAOGGGCTTC TGTOGIGITG GCAGITGTTC
3251 TGGGACCTGT TTASCAGGGC CGTGTCCACT CCTGACTGG GGACTCTCTC
3301 TCCATCCCTC TGGTAGGGCA CTAATITGCTG ACTOCCATOC AGCTCCATCT
3351 CTGCTGTTG TGTCATCAATTG OCTATAAAAGT TGACTITGTT TGTTTCTTT
3401 CTCCTGGGT ACCTTGAGTC TGAGGATCGT TGOCATAGAG ATAATGGGC
3451 AGTCAGATAC CCTGGAGTCG GGGTGGGGGG GACAACAGGG CTGGGCTCT
3501 CTGGCAGACA TCTCTGGGC AAGCATGGAA GTGCGAGGCA GAAACATGG
3551 CTGAGGCTG GATAACCTCTC TTGCCCCACAC AGCAGACOOC TGGTCATCA
3601 GAAACAGGGC TGGCACTCG TGCTCCACT TGATGATGCA ATGCTTGT
3651 CTCTTCATCT CACCGTGTG CTCTGACCCA TGGGTAAGAG AAGGAGAGAT
3701 GGCTGGGAGC CGAATTCTGG GATGTGAGGA TAGGTGATGT GGTGACTTCC
3751 TGCAGCTGOC TGACTGGGC TTTCATTTOC TACTCCCTTCC CTAOCTGGT
3801 AAATTTCAT GACCTGIGTG ATAGCTCOOC TTTOCCCTTCC TCAOCTCCCT
3851 TTAACTTGT CCCATTTTC CCAATGGATA TCTTTCCTG GCAAACCTGG
3901 ATGAGACITG ATTCTCTGGT GATTTTTTTT TTTTTCCCTT CAAGAAGAGG
3951 ATTCTTGTTG AAAAGTATAT GCTTCAGACA GCAACTCCCC CTCTCCAAAG
4001 ATGGATATGC CAAACATGGG CTCTGTTG TGGOCTCATG TGCCAGGTTG
4051 ACTTTGGGAC AGACCCACAG ATGATAGGCA CAGATGCCAG CCAGAGGGT
4101 CAGAATGIGT AAGTGOCAGC CAGTACTGTG TGGAGGTGGG AAAGTGGAA
4151 GGGGCTGCTCT CGCAGATGGA GGGAAACAGG TGGGGCTGGG CTATAGGTG
4201 GGGCATGGG GATGIGAACT OCTGGAGAGA TCTGGGCCAG GGTAGOCATG
4251 CGCTGGTCTC CATGGGGTTA GGGAGTGAGG GCAATGGCTT CCTGAGAC
4301 TCTCAGTTA CACTATATAT TTATAAAGG TCCAGCCACT GGAGCTGGT
4351 TTCACTCATC GCTGCTGOC TAGGCTCOG CAGGTGTTGG ATTCTGTTG
4401 CTGGGAATGT CGTGGGCOCA CGAGGTCTAT CTGIGAAGGT CTGAAGGGC
4451 TTGCTGTTG CACTGGGTCT TCTGCTCTC TGCTCTTCTT GTTGTGATT
4501 CTCTGGCTA CAAACTGAAA AGATAAAAAG AGGGTATAGA GCTGTTTCTC
4551 CTGGCATOC CTGGTGGAGT GGCTAGGAGT CAGGGAGAGG GATCACCCTG
4601 TCTTCTGGG GGGTCCAATC GAGACAGGAA GCTTCTTTT GGGCTGTTG
4651 GTCTTGTAC TGTCGCTCA GAGGCCACA TTGGGGCTA GGTGCAAGG
4701 TGGGAGGTTG ATGGGGATAT CGGTTGAGCA CTGTCCTTGT CTGGGGCT
4751 GTCTACATAA AGTCACGTG AGTCACATAA CGTCACCOG TTGCTTCAG
4801 AACCGTGATA GGAGTGGAGC TGGCTCTTA AGGGACCCA TGGTCCAAG
4851 CTAGCTCCA CTAGGCGAA GGAGGCAATT AAAATAGGCT TGGATGCAGG
4901 AGCTAGTGGG CCAGGTGATG GCAATGATAA GTCGTTATT TAAAGTTAA
4951 GAGCACCCCC CTCAGGAGC CTGACCCCTT ATGTCCTTTT TTATTTTAA
5001 ATCTTCATAT TCCCTCTTA TCTTATTCA TATGCATACA GATTTTACCC
5051 TCGTGGATCA TAAACATTAA TATCTGCTC TCTTGTCTTA TATCAAAGC
5101 ATTTCCCCCA TAITACTACA GTTGAAGGGC AAATGGCTT TTCTTCTACG
5151 TCGTTAGG TTTATCCCTA AAACAATCAG CATCACAAGA AACITCTGTA
5201 TATGTACCAT TTATCTGGAT TCGAGTGTG TTTACCAAGA TAGATACTGG
5251 GGTAAATGCC TTGGCTTAC TAAAGAGATGC TACCGGAAAC ATGTTTGA
5301 AATCTGTTAT AATACITAA CATAATTAA TAAATCTGAC ATTCGGTGTG
5351 AAGAAATTC TTTGAAAGCT AAAATGTAAGC AAAAGCTTTC CTCTTGTGA
5401 GGACCTGAGA GGTGAGGGAA GGGTCTTAT GIGTTCTAT ACTCTCTGCT
5451 GGGCAGGCC TAGGGAAAGTG OCTGACGTAT GCGAGCCACA TACACATTAA
5501 ATGAATGGGT CAAGAGGACT ATGTAACCAA TCAATGGTGC CTITGGCTT
5551 TGGCTCTAG GAAACTCAGA GTCAAGTGC CAGAGCCCTT GTCACCTCT
5601 ACAGACTTGG GTCTCTCTT TCTGATCCAG GGAGCCAAGC TGCAGACCTG
5651 ATAOGGTGTC TGGAAAGAGAG GACAGATGAG GATAAAGACC TGTGCTTGG
5701 GCATAAGGCA GAGTGGGAGA TGTAGGCAGA CATTAGCTG ATGATTCTC
5751 CTTCCTGTC ACTAAATGGC ACTATAGGGC CACTGTTGGG ATCTCTTCC
5801 GGTAGTGTATT TTCAATTAA GTGTGCGTAA GGATCACCT GAGTACTAGT
5851 TAAAAAAATA CAGACITCTG GGCTTCTGCC ACAGAGATTC TGCTTTAGGA
5901 GGTCTAGGGT GGAGCTGCGA AATCTGCAATT TTAAACACAT GCTOCAGTGA
5951 ATTTCATGCA GGTGAGGGCAT GAGCCACTCT TTAAGAGATG CCAOCTAAAA
6001 TCTGCAACAA CAGITGCTCT TGOCATGCC TCTGGAATTTC AACAGACACA
6051 CCTTGGGCCA TCCCTCTCCA GATTTGTGTT CTGCCACTAT GTGGCCATCT

FIGURE 3B

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

6101 GTGCACATGG CCTGTTCTGT GATTAGGGC CTGTTCTGG GCCTGGGGAT
6151 TGGGTGCTCT GTGTCGAGG CTGCGGCAAG CTGGGGCTGGCT CGGGTTGTGG
6201 CATGTTGGCC ACCAGAAGGG TAAAGGCTGT CCTTCTCTGG GTCCAGCTGG
6251 CCTGGGGAC TGAAATGGGA TCCCCCTGGAT GTGTCGAGCT GAGAGTCCCC
6301 GCCCCCTTAG TGTGTCGCTG AGTAGCCOCC ATGACATTTG TGTCGCCCCGT
6351 GGTATCTCCA AGTGAGACTT TCTGTTAAG GATCTGGGTG AAGTGAGGG
6401 AAGAGAAGGG AGGGGAAGC AGTAATGCGAG GGAGTGCGAG AAGGAAGAGA
6451 AATCCACACA GCACCTGAAC ACAGGCTTGC AGGAAGCAATT TAAGGAGCT
6501 GTGTCGAAAC CCTATGTTTC CTCTGAGGA TAAACAGGC CAATTTCTGT
6551 AAACAGAGAA ATGGGCATOC TGCAATATCG TGATGGAGOG CCTCTACTTT
6601 CTCTCTGAA GGGATGGAAG COGACTGCAG GTCCCTCTGT GCAAAGGCTT
6651 CTGCGAGGG CCTTTCTGCA CGCGCTCAOG TTGACCTGTG GGCCTTACCA
6701 CACACAAACAC TGGCTGTOC COCTCCCCCTC CCAOCTGTCT TCTCTAGAGTG
6751 ACTTGGGGTG CTGCAATCATG GTGTCGGGAT GGAGGTGGGA AGGTTGCCCT
6801 GTCTGTCAAG GGAGGCCCT GOCTTCTTCC TGCTGCTTCC TCTGGGCCCT
6851 TGTCACATATA CCTTGTGTCG AAGCTGTGCT GAAACCCCTAG AGGTGAGTGG
6901 CTGACCCAT TCTCTGCTGA GACTGGAGAT AGGGAAAGGG AGGCTGGGTG
6951 TGACCAATTC TGCTCOCATC TGTAATGCTTG CTGCTCTCTG AACAGCTTTG
7001 GCAGACCAAC AAGGGCTGCA TCCATGGGT GCAAAAGGG TGTGACAGGG
7051 AGGAGATGGG CACITGCACT CTCCTGAATG CCTCTCTGCA GAGGCCCTT
7101 GTCACCTTACCA CTGGCCAGA CAGATCTGOC GCAGGACCGC TGGGGAAATC
7151 AAAGCACAAA AGCTTGTCT GGGCTTTTT TTTTCCTTTT TGGTTTGTG
7201 CTGAGGTGTC CCTGACTTTT GCGAGGGCTC AGACCCAGOG TCTCAGGCC
7251 GTGTCGCTC CACCACTOC TTGGGGCTT TCTTTAAAC ACAGGTTCTG
7301 GATACTTGT TCTCTGATG AATCTTGGCA TATCACCTCA CACCTCTCCA
7351 TCTAGGGCCC AAGCTCAAG CCTGGTGGAG CAAATCCCTC CTGTTGCTG
7401 GCTGAGGCC CATTCCGTC TGTAACCAAC TCTCTGGGT GTGGGGTGGG
7451 GAGATTCCA GCCACTCTC COCAACACCA TCTCOGCTTC CTGGGCCCTA
7501 TCAGCAGCAG CGCGAGCTTC CCTATGCTC CCTCTCTTTC TCTCTCCCTT
7551 CCTTCCCTTC CCCCCCTGCTT GCTGCTGCC TGGGAGGAGC TATTTTTAGG
7601 GGCTGCTTCC TGGGATGTTT TACTTGGGGC TGGTITACCAT GAGGAAATG
7651 TCAACAAAC AGTGGCAAA GGCTGCAAGC ACGGGAGGC CTGCGGGGG
7701 CCTGGGAAAC CAGACGGCTG ACCCTTCTG GGCCTTGTAG AGCAGCCAGA
7751 GTGCGGGGGAG CGACGACCTT GCTCTCTTGG GGCTTGTCTAG TGACCCCTTG
7801 GGGATTCTCT GTGCAAAGC TGATGAGGG CCTTTTGCCT ATAGGGCAATT
7851 TCTGGAGCC TCTGCTTCC CCTGCTTGA GATOCAGAGG CAAAGTGGG
7901 CCTCAGGCTCT TTGTCACCA AAGTAAAAC TGCCTGAGTG AGGGTTGAAG
7951 ATAAGGGGAG GATGCTGGGT ACAITGCACAG AGCCTTGGGG GTTCACATGG
8001 GACCATTCACCA GGGCGGCTC CTCTGTATCA CAGCCCCAG CTAGTCACCA
8051 GTGTCACATG TGTCAGGGCA TTAGAAACCA TGGTCTGCT CTTGTCGTC
8101 GGATGGACTT TGCTTTAAAT TGGAGACTCT TTGCACTTTT AGACTGAGAT
8151 TCAAAGAGGA AGGGATGTGG CATCACAGTG TCAGGGTGAG GTGGGGAGA
8201 TCGTGGCTTG GGATTOCCAC TGGTCAGTGT CCTAGGCOCA GGGCTGTGCA
8251 TAAGCAGCTG GGGAGGTGG AATATGACAT CAAATCCCTG CGATGCTCTT
8301 GTTCTGCTC CCTAGAGTGC CAAGGGACG AGAOGGGGGC CTCTGCTGCT
8351 TGGGAAGGAG ATGAAAGGC CCTAGGAGGG CAGCAAGTGA GGGCGCTOC
8401 CATGGAGGCC TGAAATCAGT GGGTTGCGAG GAAGTTCTC ACATCCATGT
8451 TTAGGGTCAT AGGCACAGAC CTGCAAAATA CCTTGTGCAA AGTTAAGAAT
8501 GTCTTGAGA TTGGAACITG GGAGAGTCTT CAGTCAGAGT AGGAATGTGC
8551 ATCTTCTCC ACGTACAGAG GATGTCATGT TTACGTTGGCA GCAGGATCT
8601 ATTTGAAGCT ATGTCGTCGA TTGTCGTTTT TTTTTTAGGA AAATGTCAT
8651 AAGTCAGCA GGCACATCC TGAGAGGGCC ATGGAGAAC TGTGGCCAGC
8701 CCTCCCTGGC CCTGACCTT GCGAGAGGAA GAAAAGGGCA TTGGAGTAGG
8751 CCTCTGCTT CAGGOCAGAG GGGAGGTGG TTCAAGGGCA GGCCTGGTGC
8801 ACCCTTGGC TGCAAGCTAT CCTCTCTTCA TCTGCTTCTC TCTTCTGCTC
8851 CCTCCCTGGC CCTCTGCTT CCTCTGCTG CCTCTCTCTG GAAATGTTGG
8901 CACCTGGAC CAAGTCTGCA AGCACTTGGG CAGAAGGGGG GAGAGGTGG
8951 GTTCTAGGA CCTTGTCTTC CCTGGGGCTG CCTCTGGCT GGGCTCAGAC
9001 CACTCTGGTC TAGGCAAGCTG GCTGGGGAAA GGCCTGGAGCT GTTCTGCTT
9051 TCTGCTCTTG CCTGCAACCTC TGCTAATGAT GGGAAAACC TGCAAGGGGC
9101 TGTGGTTGGA CCTGGGCTGA AGGCGGGCAG GGGTGGGTCT CCTCATGGCA

FIGURE 3C

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

9151 GTAGCACACCA GGCAGGCAGG AAGTGGCCT GTGCAAAAGC GGGAAAGTGGC
9201 AGTTGTCAAA CAGGAAGGCG GGGCTGGGC TGTGGGAGGG GCGGGGATGA
9251 GCGGGTAGA AAGGTGGT GAGGAGGGTC CAACCTGGAA GGTCTGAGCC
9301 TCTCCCTAGT GGTACTGGA AGGAGGGTG TCTCAAGGG AGACACCITT
9351 GCAGCACCTT GAGATGOGA GOCAGGGCOC TCCACITGTG GACCAAGGCC
9401 ATTCAGTGGC CTGCGCCTTT TTGGGGTTGG AGATGCTGOG TCCAGCTGGG
9451 ATGCGCTTGC TTTTGGAAA GATGCTCTAG AAACCACTAC TCCATCCCTGG
9501 AACCGCTCTG CTGCCACTGC TGCCTGGATG GACCCCTCTGC TTTTTTCAG
9551 CGGTGGCCA GCGCTGGATG TGACTACAGG ACAGGAAGTG TCAGGGGAAG
9601 AGACAGAGA CAACAGCTGG AGAGGCTGG TGCTGGCGG GCGATATGTG
9651 CGAGCAGGAA CGGGAGAGC GGGCAGGTA GAAACTGCTC TGTTCAATTGA
9701 GGAGACAGTG TGGATGGCA GGTGCGAOGG CTGGCAGGAA GAGGAGGAA
9751 CGGGACAGTG GCACTCTTG CGGCGTTCC CTCCTCTGAG GAGGCGGCTG
9801 TTGCTGCGCA TCACCTGCG ACTGTAGACA CAGGTGGGOC CGOCAAAAC
9851 AGGGAGGGAC ACTCCACCTC CAGGACTGCA ATGGAGGAOC ATGTTGGGAG
9901 CCAGAGAAGC ACCCAAGGAAC CCTTATGTCG TGTGTTGCG AGCCCTGCATC
9951 TGCTGGCT GAGGGACAG TGGGTCCTAT TCACAGTGT CTCGGTGATA
10001 GCTGTGGCCA CAAGCCAGC CGAGGAGAOC CTGTCAGCT TCTCACTGGG
10051 CCTTGGAAA GGAGCTATAT GCGAGACCTT ATGCAAAACT CCTGACCTGT
10101 ACCACCTCTG TTAAACCTCA GATCTTGTG TCTCTTATTG AGAAGTGGG
10151 AACCTCTTGG CGGGTGGCG TGGCTCAOGC CTGTAATTCG AGCACCTTGG
10201 GAGGCGGAGG CAGGAGGATC ATAAGGTGAG GAGATCGAGA CGATCGGGC
10251 TAACACAGTG AAACCGCGTC TCTACTGAAA AATACAAAAAA AATTAGCGG
10301 GCAATGGTGT GGGCGCTGC AGTCCCAGCT ACTCGGGAGG CTGAGGCGG
10351 AGAAGGGCGT GAACTTGGGA GGGCGAGCTT CGAGTGGAGCC GAGATCATGC
10401 CACTGCACTC CAGCTGGGC AACAGAGTAA GACTCATCT CAAAAAAAG
10451 CAAAAAAAC AAACAAAAGA AGTGGAGGAAC CTCTTCCCA AGATAATGTG
10501 CCTGGCTCAC TGTCTCACCT ACTTGGGTC CTAATCAAAT GTCACCTCT
10551 TACTGAGGCT TTCTTGGACT GCGCTACTCA AATCTGACT CGCCACCTTC
10601 TCTGCTTTT CTACCGAGCA CTTCGCGTGA CATCTAACGT GCTGTTGAGT
10651 TTCTTACTG TCCATCCCTC CGCCATACAC AAACCACTAG AGTGTCACT
10701 CCATGAGGGC AGGGATTTT GTCTGTTTG TTOGCCACTG TCTTCTAGC
10751 ATCTTGAATA CTGCTGTCA CATAGTAGGC CTCAGTAAAT ATTTCCTTTT
10801 TTTTTTGAC TTGCTCTGTC ACCCGAAGCT GGAGTGTAGT GCGCCAATCT
10851 TGGCTCACTG CAGCCCTAAC CTCCTGGGTT CTAGTGGAGCA CATTGGCTA
10901 AATTTTGAT TTTTGTAGA GATGGGGTTT TGCGATGTG GCGAGGCTGG
10951 TCTTGAACCT CTGACTCTCAA GTGATCCACC CAACCTGGGC TCCAAAGTA
11001 CTGGACTGGG ATTACAGGGC TGACCCACCG CGCCCAAGCAGA CGATAAAAT
11051 TTCTTGAAGG AATGAATGAA GCTGGGGTGG GTTTAATAGC TTGCTGGATG
11101 TGGCAGTGT GGGCTCAATC CAGGCTGTGTC TGACTTCAAA ACCGATGTG
11151 TGTTAAITGC CATACTCCAC AGCTTAAAT CAGAATGAGG ATCAAGGTAT
11201 AGTCTGGGG TTCAAGAGAAG ACCTGGGCT TGGCGGGAAC ACAGGGCTCA
11251 GCTCTTGGG GTAAAGGCTG AACTAAGAGG CTAACAAGGA CCTCTGGAT
11301 GCTGGGAGC TCTTGTGAGG AGCTGGGAGC CTGAGTGTG GTATCTCTC
11351 TCCACTCAA GTCACTGGTA AAGCAGAGTG CCTTATTTT TAGTGTGTT
11401 GCTGTTGTG GACTGTAACC ATTAGCTAGT AAGAGACTTA AGGAAGGAGA
11451 TAAACATTA TCTTCTGGGC CTTCCTCAG CTGCCACCTC CGCAATTGCAA
11501 GATGCTGTGTC TCTGCAACTC CGCCAGGCAA CCAAGGCTGA GAGTTATGGG
11551 CTGGAGGGTG GTGAGGTTTG TGCGGAGAGA GAGGGCGTG GGTCTGTAGC
11601 TTGGGGCTG CGGGCTTGG TACCTCCATC TCAAGTCCAG CGATGGAAGG
11651 AAGGTGGGGT CATGTCACA CTCCTGCGAGA TCTGGAAGAA GCAAGCCCC
11701 CAGCCACCCAG CCAAGGCTGT TACAGCTCOC TTGAGTGTGCT CGCTCTGG
11751 GGTCACTGGC CACATCCCTG TGCCTGGAC CAAGGGATGC CAGGTGATCT
11801 GGGAGTTGGG AGTTACTTGG GTTCTCTCTG GCTGCATCTT GGTGGTGGT
11851 CATGCTGAAC CGAGGACAG GAAGGAAGGC CTGACCCAGA TCTTCTGGCA
11901 GCTGGGACGG ATTAGCTGGG CAGCAGGAAC TAATCTCTGT CTGTOCCCAC
11951 CTCTTCCAC AAAGTAGAGC TGTGCTAGA GGGAAAGTTT AGGACAAAGC
12001 TGGGTTGGT TAGTGAACATAAATGTGA ATTTCCTCTA GTCCATAATC
12051 CCTACATTAAT CTCACACTGA CAGTCTGAG TTGAAATCC CCTTTTATCC
12101 CCTTCTCTG GTGGGATCTT GGGCAAGGTTA CTTCACCTCC CTGGGCTCC
12151 GTTCTCTCCA TCACTGGAA ATGTGGACAA TCATAGCAATT TAATTAATGG

FIGURE 3D

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

12201 GATCATTGTC AGGGCTGTGG GAAGATTTAC AGAAGCTTIT TGCTGTTAG
12251 GGTAGAGGCA GGGAGACAGG AATAGCTTGG CAGCTATGGA TGTGAAGGCC
12301 OCTGCCCCGGG OCTGGATAAT TCAGGGTGAA CTGGACTCTC TTCTTTTGC
12351 ACCCCCTCCA AAGCTAGAG TCCTAACTCA ACTCTCACCA TTCTTTATCT
12401 GGCCATAATA GCACAGGGGT GGAGAAAGAG GGCTCTAGGC TCAGACCACC
12451 TCCATCACTG CCTGTTGGT TTACCTTGG CAGATTACTC TATCTTTTTA
12501 AACCTGTTTC CTGGTAATA TAATAGAGCT AATCAGATCC CTACTTCACA
12551 GAGTTTCGT AGCTATGAA TATGTAATC CATGCCCTCG CCTGACATGT
12601 AGTCAGTCCA TAGTAAGGCA TTGTTATGGC GACTACTGTT ATTGTAAC
12651 CCTTATTAAAG CCCCTTTA CAGAAAGAAC TCTAGAAAGC ACTACTGGA
12701 AAGGTACCC CGCCCTCGAA GACCTTGCAA CTGAAAGATA ACTGATGAA
12751 TATATGATGT GAGAATCGT AGAAGTGCAT TGGAAATCG GGGGGGGGG
12801 GGTGGAGTAG GAGGGAGAAG TCACAGTCTA CGAGAGGGAG CAGGGAGAC
12851 TTCACTGAAGG AGGTGACTTT TGGCAGGATT TCAGCAAGTA GAAAGAGGGA
12901 AGGACAGTGG GGGAGGGCTG TGAGGOCCTC GGCTGTGAG TAGCATCTC
12951 TCTTCCCAAG TACTGGAGCT CTGGCTTGCCT GTGGAAAGGA TTGACCCAOG
13001 CAGCTCACIT GGATCTGGGG ACTTGTGGAT TTCTGGTTAT TCCACAAAAA
13051 CCAAGTAATC CTGGAGTCIG AATTTGAAGA CGTCAAAGCT TACAGCCATG
13101 GTGGCAGAAGA GGACTCOGGG GAGAAGCAGG ATTGTGTCG TGGTTTCTCT
13151 TTCTATATAAA TGCCCATCAT ACTAATGACA CCTCCCTAGAT TGTTATGAGG
13201 ATAAATTAAA AGAGGCAGCT GCGTGGTGTAA GAAGTAAGCT CTCAATAAAAT
13251 GTTAGCTATT ATTATTTAA GTCATCATTA TCTTGATCAT CAACCTCTT
13301 ATTATCAGCA TCAATTATGTT TCAGGCTTGC CATCAGGACT ATGTAGAGAA
13351 TATATGCAAAC ACCCTAGCC AGTGCAGGAT ATTATAATTAGG TGCTCAGTAT
13401 AACCTAGCTA TTATTAGTGT TCCTAACAAAG AAAGAGATTG TGGGCCAGGC
13451 GGGTGGCTC ACGCTATAA TCCAGCATT TTGGGAGGCC GAGGGGGTG
13501 GATCACCTGA GGTCAAGGAGT TOGAGACCAA CCTGCCAAC GTGGTGAAAC
13551 CGCGCTCTA CTAAAATAC AAAAATTAGC CAGGCGTGGT GTGGTGTC
13601 TGTAATCCCA GCTACTGGG AGGTGAGGC AGGAGAAATTG CTGAAACCCA
13651 GGAGGCGAAG GTTGCAGTGA GCTGAGATCA CACCACTGCA CGCAGCTG
13701 GGCAACAGAA CGAGACTCGG TCTCAGAAAG AAAAAAAAGAG ATTCTGGACA
13751 CCTGGACCA CTGAAACCTT GTTGTGGTGG AAAGAGCACC AGAGTTTAG
13801 TTGAATACTT GGATTCAAAT CCTAGCTCTG CTGCTACTG CCTGAAAGTG
13851 TCCAAACCTT CAAGTCATTT CCTCATCTGG AAAAGGTGGT CATAACTATC
13901 TATCTGGCCCG AGGCTGGTG GCTGGTGCCT ATAGITCCAG CTATTCTAGG
13951 CGCTGAGGTG CGAGGATTGC TTGAGGCCAG GAGTTTGAGG CTGCGATCAT
14001 GCGACTGAC TCTGCGCTGA GGGACAAAGT GAGACCTAA AATGAAGGA
14051 AAACAAGTTG TCTCAGGAT TGCCATGACT TGCTGCATTA CTTCAGCAGA
14101 TCATCACAAA TGCTAGTTA GTACCTGAAC TGAAGGAATA TGAATAACAA
14151 GGTGACCCACA AGGAGAAATGG ATGGTTGATG GCTTTGTGTT TTTCTCTCT
14201 CCTTTAGAT CACCAAAAC TAGAACGTGA GGCTCGGATA TGCGACTTC
14251 TGAAACATCC AAACATCGGT GAGTGCCTGG GCATGGAGCA TTTTGTTGGT
14301 ATTGTTGAGA AGCAGGGATA ACAGATATCC ACTGCCTTTG TGTTGTTGGAT
14351 CACCTCTGTC TGTTGACCTT CACCTGGTGT CTGTTTTAC ATGAGCAGGA
14401 TAGCAACTGT GTCTCAGAAT TCCTGGCAT TCTAGTTAG AGACCTGAGT
14451 ATCTGCATCA CTGGGCACC TTCTCAGGGC TGGGGTGTGA GGCATCAGAA
14501 TAGGTTCTAG GTGCTCCAT TTGTATTCCCG CAGAGCCAGG AAAGCAAGCT
14551 GTCAGGGTC CTCACTGCTG GAGGTTCGGG GCTCCCTAGCC TGCCAGCGTC
14601 CCTCACCAAGG GGCATACAC ACCCTCATG CAAGGGTCAG GATTTGTTT
14651 GTGGACCTGA AAGAGTTTG TTCTGCTGC GTGTCCTGC ACACCTGGG
14701 GTGTTCTAGT GTGCTCCAT TTGTATTCCCG CAGAGCCAGG AAAGCAAGCT
14751 GCGGGCTGTC CTGGCTCTC TGGCAGAAGG GATGGCAGGA ACCACTCAGT
14801 ATGGGAGG AGAAAAAAAGA GGATTTCTCC CTGCTCCAC CCTGACTGGG
14851 GGGACAAGAG CACATGTTG GTTGTGCTAA AGCCTGAGGA GTTTGCTG
14901 CCTCAACCCA CTCTGGCTCA GTTTTACTTT GTCTAGCTGA ATGGTCTT
14951 GCGAAAGCG TTGGCCTGAA TTGGTGTGCTC CTGAGAAG GGACAGAAAC
15001 TGGGCTGGCT GCAGTGTCTG AGCAGAAGCC CGAGTGTGAA CTGAGGGCAG
15051 AGCAAGGAGC ATCTCTAGG TTTCCTGAA AGCCTGAGG TCATCACAAA
15101 AGACAAACAGG TGTTCTGTC TCCCTCAGGCA TGCCCTAAAT CTCAAGGCTC
15151 CGCGCTCTGTC CCTGCTCTGTC TCTGTTGGGCG GCGAGGGCTG
15201 TGAGGTGACT TGCTGAAGGC TAATGCTTCC TTCAAGAGCTA CGACCGCC

FIGURE 3E

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

15251 GGCTTCCAG GTCTCGGGCT AGAACAGTC AAGTGTAGTC TGTGATGGAA
15301 GGGCTGAGGT CCTGCTCTAG CCCCTGGGAG GAGGAGCAGC TCTGAGGTAG
15351 TCAGAAOGTC AGCTGTGCAG GGCTTCTAG ATGGCAATCA GCAGCTTGGAA
15401 TTACACCGA AGCAGATTGG TGTCGAGCTGT GGTGATGGC TTTCGCTGAT
15451 GCAGTGTGTT CTGAGAGGC AGCACTCTC AGCTGGTGGG TTGCTGGCG
15501 CAGAACTACT GGAGCTCCCTA GGTTGTTCT GAGGTTAGGC CTTCACCTGA
15551 AAACAGGCCA GTGGGACTG ACACTTGTGOC TTGGTAGGA GAGGGCCAC
15601 AGAGGGAAAC ACCTAGAACCA GCAGTCACAG ATTAAGGCAATG TTTTGGCTGG
15651 CTGACTCAGT GGTCTAAAAA TATTTTATT ATTGCCAAT ATTAAAAAAT
15701 GAGATTTCAC ATTTTGGAAA AAGAAAAAAT CTATTCCCCC GCCTTCCAG
15751 TCAGAAGGCT TGGCTCTGCT GAGGCCCCAC CTGCGATGGC CAGAAGGAGC
15801 TGTGAGGAGC CGTGGCTGOC CCTGAGGCC GCTGGCCACT GTCCCTGTCA
15851 CCCTACTATGA GCTCACATTG GCAATTACCCA CCTGGGGCCCT TGTAGGCTT
15901 GCAAGCTTGT GACCTCTAAC CTAGAAGTTTC CAGAACAGGA AGAAAAAACAA
15951 TGTGCGTGC TAAAGCACC CATAAGCACA GAAGCATTGT GATGTTCCAG
16001 ACCGGGCTC CAAATCTGA GGAGGGTAAAC TTGCTTCTCT TTATGCTCT
16051 TGTGACCAAC TGGTACAGCA GTGATAATTG GTGCTCATGT AGGCAGGAGA
16101 ACAGCAGCTA GGGGTCAGTG ATGAGGAAG CAGAACCATG TCCACATCAC
16151 CGCGATGGG GGGGGGTTGA CCACTGGGGG GTTGACCAAG GATGGGTGG
16201 CCAOGGACGG GTCAAGGGTAT AATGAAGACA ATTGAGAAAAT GAGCAGGAAG
16251 GACAAAAATA GAATTCCTAGG TGAAAAAAAGC CCTAGGTGTC TTTTATTTA
16301 TTTCTAGAAT TAAATACATA CTTTTTACCC CCATAGACTT CACTCTGTT
16351 GTTGGCAGCT TACTTTACCC ATCTGCGCTC GGCTCAGAAT GGAGGCAGGC
16401 GGAGGGACCA TATACTCTGG CGCTCTGCTC AGAGGCCAGG TGGGGCACAG
16451 TCACTCTTTT GGCTCTGAT TTGCTAGAAC TGTCCTTCCA TTTCATGACT
16501 GCTOCCAGGT CCTAAAGGAGG TTGGTGGAG GACCGATTCT GGGGTTGAGG
16551 GTGGGCAGAG GGAAGGGGGG GTCAAGACTG TGTGCTGGGA GCTOCAGCAT
16601 CGGTGGGAA CCAGGGCTGT TGGAGATGTG GGGGAGCTGC AGGTGCCAGGC
16651 GGCTGTGGTT GCACTGGATC TGGACCTGGC TTGTGGCAGG AGAGGAGGCA
16701 ATTTTGTGCC CCTAAATTCAC TATTCCTCTT CTCTCTCCAC TGCGCTGTG
16751 TTCAAGACTG TGACCCCTTTT GGCTCTGGC TCTTGAACTC CACCCAAAG
16801 GGAAACAAAC GGGCCAGGCC AAGAACAGTG CACAGTOGAG GAAGCTAGAG
16851 CAAAGACCAT GTGTCAGCC CTGCTCTGG TCAGACTGG AGGCACCTGAA
16901 TTCAAGATGGA GCAATTGGTG CTACGGGCCA GTCACTGCGA GTTTCCTT
16951 AATAGCTAGT ATATTCCTGTC CCAGGAGTTA AAAGCCTGTT GGAAGAGTGA
17001 ACCCTGATAT AAACCTCTGA CTTTGGGTTA TGATGATGAG TCAATGTGGG
17051 TTCAATGACG GTAAACAAATC CACACTCTA GTGGGAGAGT TTGATGTGG
17101 AGGAGACTGT GCATGTGGG GACCTGGGT ATTGGGAAT GTCTGGGT
17151 ATTTGGGAAC ACCCTGTAAT TCOGCTCAA TTGTTGGTGTG AACCTAAAC
17201 TGCTCTGAAA ATAAGTTTA TTAATTAAAA ACAAAACAAAC AAACAACAAA
17251 ATGCGTGTGTT CGGTGTAAAG CACACTGCC AACTCCAAAC AGCGCTGGGA
17301 GTGTGGCAG TGTTGGGGAG TTGAGAGGAG GAGAOGCTGG TGTGAGGTCT
17351 GAGGTCTGAA TGAAGTCGTT CTCACCTGTG ATCTGCGCTGC TCCCTGCTCT
17401 CAAGTCCCTC AATGAATAGA CTCCTGCTTC CTCGCTGCTG AGCTGCCCA
17451 GCAGTTCTGA TCAATGTCATCA GCATGTGGT TTAGAGCCAGC ACTTCCTCAA
17501 CTTTTATGTC CTTAAAGACTC ACGCAGGGAT CATGTTAAA TTCAAGATTCT
17551 GATTCAGGGG GTCTGGGGTA GGACCTGAGT CTCCAGCTGA TGCTCATGCT
17601 ACTGGTCCGC ATGCGTGTCA ATACCTGGAG AAGCCAAGTT TTGCGGCTC
17651 CGAGTCGGCAT CCAGATTGG GGTTGAATC TGGGATTGTC TAAATTGTA
17701 CTGTCACCTC TGGCAAGTTA TTAAACTCTT CTATGCGTGC CTCCTGTTTG
17751 TTATCTGGGT CCTCTGGGG AGTGTGTTAAG AAAGGGTCA GCGAGGAAAG
17801 GGGGCTAGGA GGGAGATGAT GAAAATGGAG ATTCAGCGCC CTAGAAGTGA
17851 TCTCTCTAAG ACCCCCCAGGC TOGACTCAGT TCACAAGTTA TCTAACGCTC
17901 ACCATTAACTC TTGAGGCCA GTACCCATTG AGCTAACAGT AAGTGTAGCA
17951 AAGAAACGGT TGCAAAATAA AAGAACATT GAATCATGAC TGAGCGTTTC
18001 CTACATCCCT GCCCCATGG TGGGGTGGG GGGAGCGCTG CCACAGTAAG
18051 CTCTTGGGGG GCAGCTCAGT CCCCCACAAG CCCCCATGGC AACAGGACCT
18101 CCTTCCACT GTGTTAATGTC TGCAGATAATT TTAAACAGCA ACACCTTTTC
18151 AGTGCCTTTT GGAGAAAGAT TTGTTAGTTA AAATGTGGCA TATTGTTGGG
18201 TGGTTTTTAA AGAATTGGAA ATACCCACAA CATTGGGTT GTGGCTATCT
18251 CAGTCCTGAA AGACATGAAA TATCAAGTAA AGGTTTGTAG GTGTTTGGC

FIGURE 3F

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

18301 CTGTTCTGTC TTCAOGGTT TTTAAAGAAC AGCAATTAGG TTTGTTGCTG
18351 AAATGCAGTA AATGCTTTAT ACTCTTTCG CCAGATCTTC CTGTCATGG
18401 ACATGGCTG GCGCTGTTG GCGTCATGC CCTGTCCTTA CTCTGGAATG
18451 GGCTGGGTG CAGATTATT TATTCCACGC ATOCATAGTC CCTCTGCTCC
18501 TGCCCTCACAG CATGACACAG TTGTCCTAG TAAACGCAATT TGTTAAATTG
18551 CCGGTTAAAC GCGCTGCTTC OCTCTTGGCC TGGCAGCTCC AGGTGGCAGG
18601 GCGGCTCTT CCTCTCACAG GCGACATCCG TGGCATGTAC AGOCTOGCGT
18651 GCGTGGGGT ACCTGCGCAG TGGACATGTC CGAGCCAGTC AGAATGGCCA
18701 CAGGTAGTGG GGACAGATTG GAGCTCTT GCCTAAGAAT TTGAGAAGGT
18751 GACTCCAAAG CAACTCTGCA ATATCAGGAA CCTTGTGTT GGTTGCTT
18801 GGCTTCAGT CGCGCTCTG CCACCTAGTG TGAGTTTGGG CAGGTTCTT
18851 ATGGACCTTC AGTTTCTCT CCTGTCAGAT GGGTTATTAT ATATGTAAGT
18901 AGCTACCTG CAGAGCTGGT GTGAGGGTTC AATACAGTAA TGCAOGTGG
18951 GCGCATGGAA CGATGCGGC ACAAGGACAG CTCAACTAAG TGTTAGTTG
19001 TAGATTAGA TTGTTATTAT CAGAATCTGA TGGGGTGOGG TGGCTCACAG
19051 CTGGTCTCC AGCCTCTCG GAGGCTGAGA CAGGAGATGG CTCAAGACCA
19101 GGATCTCCAG CCCAGCTGG GCAACATAGT GAGACCTGT CTCTTAAAAA
19151 AAAAAAGAAA TAATGAATCT GCTGTTGCTA AATAGGCACT TAGAATGGCA
19201 CAGTCATTTTC TCCCTCTGTC TTCACTGTC TGTTAAATTTC TTACAAATT
19251 AAAAAAAATGT CGATAGCAGT CCTTAACTCAGA TACAGCTTCC TCCATCCCTC
19301 CTGTCCTTGG CAGGTGCTT GCTCTGGGG ACACATCAAA GCTGTCCTCT
19351 CTGCTGGGTG GCGTAGAAGG ATTAGTCCTTC CCTTGCTGCT CCTTCCTCT
19401 AATTCCCTTC CGGGCTTCC TCCACCTGG GCTCCTGTTG TGGCTTCT
19451 GGAGAAGGGC AGACGCAAT GACTCCTGTC CTAGGAGAG CGCTGGGTG
19501 CTGCACTTCT TGCCCTGTC TTGGCTCTG TGTCCTGGGC GGGGGCAGGG
19551 TGGTGTGGGG CATGGGGTGG TGTTGGCAT GGGGGGGGGT TCTGGCTGAG
19601 GCAAGGCTCA GTGCGCAGGC CAGGAGAGG TGAGTGGTC CACTTCCTG
19651 AGATGGTGT CAGCATCATA CCTGCTGCTG TCCCGTTAT TCCCGATGCT
19701 GCTGCTGTTA GTCACCTCCC TAATGGAGCT GGTCTGTCAG TGCTGGGACA
19751 GCTGATTTCG AGGGGATTAT TTGTTATTACA CACTTTAATG CTTTTTAATA
19801 GCAAAATTGG AATTAATGG AAAGTCTTT TGGAAGCGAG GGAGCAGCAG
19851 CTGCAAGAG ACTCAGCGTG AGGACACOGAC TTAGACCGAGA GGTGGCCAAG
19901 TGAGTGGGGC GGAGGCAATG GCAGGACTTC GAGAGGACTT GATTGAGTGT
19951 ATATGGAGT TGCCAGGCT AATTTTTATG GGAGGAAGGC AGGGGCCCTGG
20001 CGCTGGCTCC TTCTCTCTG CCTAAAAGCC COCTCTGTC TCTGCGAGGC
20051 TAGGGAAGCA CCTCTCTTGC CCAGGAGAGA ATGTTATATTG GATATATAACA
20101 TTATATCAA TAATGGGAGG GATATGGAA GTATCACCTG CCTTGTATCC
20151 CGTTCCAGA AATACTGAGA TTGGGATGGG ATTGTTGGGG TTGAGTCACT
20201 AGATTAGATC AATAGTGTA GGTAAATGGG TGCGGAAACA GTCCTGAGGC
20251 CCTGGCTCOG CGCGCTGCAG CCTTGGAGT CCTCAGTCAT CAAGGGAGGA
20301 GAAACAGGGG CCTATAGTGG TGGTCTAGTC CCTCGGGACT GTGCGCGCTG
20351 GGTGTTATAC TTGCTCTCT GAAATGTCCT GCTTGTGGG GAGGGACAT
20401 AGGGAAAGCAC CTCAAGCGCTG AGGAAAOGTG TGACACTGGG AATGGAAAGCA
20451 GCGAGGGCCC ACCCAGGAAG AGACATGGCC ATTCTTTGTG CTCTAGCAC
20501 TGAACCTGGT AGTTGGTGT CAGGCCATTC CTGAAGTGCT CCTATGGTG
20551 CACCTGTAAC TGCCAAGGCT TGGAGCAAAG GTCAAAACOGA GGGAGGCCCT
20601 TGGAACAGAA GTTCCOCATC AAGAGAGTTC ACCTGAGGGG AGGGACAGGA
20651 CAGTCACCCA AAGCGGAGTC GTTTCTGCAAT TAGAATGATG CCTCAGGGTT
20701 GGCATTTAAC CGAGAGGGGG CCTTGTGGGC AGAAACCTGA AGAGGAGACC
20751 TCAGAAAGACT TCAGGTGGT TTCTTACCCA AGAGCTTGG AGGGGGGGAG
20801 CAGGGAGGGG TTCCGCGCTGC CAGCTTTTTC TOGCCAGCTGG TGCACTGCGC
20851 GAGTCCTCTT CCTAGTGGCAC CCTCOGGAC CTGTCCTGCGA TGCTGCTTAA
20901 GGGACATTG TAAGTGGTCT TTCTTTGGG TGCGAGGGCT TTGTTGCGT
20951 AATATGGGGG CTGCCCCACA TTCTTAAGG GAAGCAGTGG TGAGACCCAC
21001 AGTCCTTGGG GTCAAGTGGC ACTGGATTCA CATCTGACG CAOCACCTAG
21051 AAGCTCTTGTG GCGTTGTTA AGAGACTTGTG TGTCCTGAG CCTCTGGTGC
21101 CCTCATCTGT AGAATGGAA TAACATTCACT CCTCAGGGTGT CGAAAGGAAT
21151 AATAAAACTCC TCAAAGGCAG GCACTCTGTC TGTCCTCTG GAATCCGCT
21201 GCGTAGGTG GGGTCAGCA CATAGTAGGT GCTTGATAAA TGCTTGAGA
21251 ATCAGTAATG TAATGCAAGAG CCTAGCACA GGCCTGGCAT AGTAAGCACT
21301 TAATAACCTG TTATTTGTTG CATTGCGTGA ATGTTGGGT GGCCTOCAG

FIGURE 3G

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

21351 GCTCACCATC CATTATCCTG CACCACTGTC CTCTCTGCTG AGCTCTGCT
21401 TTCCACCTTC TTCCCCACCC CTTAGTTCTG CTCCCATTTA CTGCTCTGGA
21451 AGAGCTCTCT GCCTTCCCA TCTGGTCAATT GTTGTCCCTT GCGGTCAACA
21501 TTGCTAGGTG CTGCTCACGC TGCACTCAC CATGGTGCAT CATACTCCAG
21551 GACCACCTTC TOGGAGACCA GOCCTCTGGG AAGGTCTGGG CTTCCTCCA
21601 TCTTGACCTTC TTGACCATGA AGCTTTCTC TCTTGCTGAA GTCTGAGGTG
21651 GCAAACAGAG CGCAGGGCTC TGGCTOOCAG GCTGCATAGC CTGGCACCTGG
21701 GGGGACTCTGG GCAACTGOCG ACTTCCCCC ACTGCTCCCT CTGGAGAGOC
21751 CTGCTGAGGCC GACAGGATGG GGCAGGGGTG GGCTGCTGAA GGAGAAGOC
21801 AGGATTCTCA AGTTTCTCT CTGTTAATCT CTGTOCCCAT CTCTCTCTT
21851 CGAGTGGGCC TCCATGACAG TATTCTGAA GAAGGGTTTC ACTAOCCTGT
21901 GTTGACTCTG TAAGTGCAC TTCTGAGGG TGTCGGGGCC TTTCCTCTA
21951 GCTGACTCAA AATGAAGGCT CAGGAAGGGG CCTAAACAGG CTCTCAGCC
22001 TCGGCCAGG GCGCCCTCT TGTGCGAGG GAAAGGATTT GACTGGGCA
22051 GATTGCTGCC CCGACCAAGG GGGCTOCAT GTTCCCCAG OGTOCCCCA
22101 CGCTCTGAA CGCCAGGACA CCATTCTCT CTGACACTCTG TTCAAGCAGCA
22151 CGCTCTGCAC AGATGCTTT GTCTGTTTC TCAGTGTGCT GTCTTAGTG
22201 AAGAAATAAA AGACAGCTCT TTGCTGACC TTAAAAATCC TGAGAAATCA
22251 GAGGTAGCTT TCAATTAGTGTG GAAACCAGGC TCCATTGGAT TTGCTCTCTC
22301 CTCCACGTG GTTGTGGTTT AATGCTTAA AAGTGGCTCT TACCTCTGG
22351 ACACCTCTCT CCAGGATTCT CAGGGTTGGG TCTCTGIGIC ATTTGGCTCA
22401 TTACTCTCTCA ACCTCAGTAG TAGCTCTGTC CTCTCTGGGCA AGOGATATTT
22451 TAGTGTGTTAT GTTGGCTCTCA AAGCTGTGAC TTTCGGGTTA GGTGACTGTT
22501 TTTCCTCTAG ATCCCTGTAT CTCTCTCTCT GCTGACTAT TAGTGAATCT
22551 GTGCAATTG GAAAAAGAAA TGTCOGGAAG GAAGGGAGGG CCTATGATAC
22601 CTCAAGGAGA ATCOGGGTGT CACTGAAGGA TOGAGTGTGT TCTGAGCTCT
22651 CAGATGAAAT GCACTGGGAG TTGGGATTTCT TCTGAAAGGCC ATTCCTACAGG
22701 GTGACCCCTGT TTCTCTCTGG ACATGGGGT TGACCAAAGG ACCCTTCTG
22751 CCTCTGACCC TCTCTCTCCT GTTGGTGTCA GIGTGTACOGG OGGGGAGCTG
22801 TTGAAAGACA TTGTTGGCAG AGAGTACTAC AGTGAAGCAG ATGOCAGGTA
22851 GGATGAGGGC CGAGAGGTTCA AAATGTAGCT CTGGAGTTA GGACTGAAGG
22901 AAGCTTGGC CACCTTGGG GTCCAGCAATT GTACCTGTTT GAATAGTCTT
22951 TGGGAAGAT CAGAAATAGCT CTGCTGGA GAAAGATTCT GTTGAGCTGG
23001 GCTAGGGCTT GCATACTGTG GGTGATAITA GAAGTAAAAA ATTCAGCACT
23051 TCCCTAACAG GCGCAGCTGC TCATGCTGT AAATCCAGCA CTTGGGAGG
23101 CTGAGGCACT TGGATCACCT GAGGTAGAA GTGAGGAGCC AGOCTGGCCA
23151 ACATAGTGAAC CCTCTGCTC TACTAAAAAT ACAAAAAAAAT TAGGGGGTGC
23201 TGGGGTGTG TGCGTGTAAAT CCTAGCTACT TAGGCGGCTG AGGCAGGAGA
23251 ATCACTTAAAC CCTGTAAGCC AAGGTGTGAG TGAGCCAAGA TCATGCCACT
23301 GCACTCAGC CTGCGTAACA GAGGAGACT ATGTOCCCCCT CCCCCCCCC
23351 CACAAAAAAA ATCACTTCA AAATGAATGTT TTACAAAGCT TTTCCTAAGTC
23401 TCCCTTACCC GCGCAATGTC CCTCTCTGOC TCTCTCTCTC TTTCGAC TACATGTAC
23451 TOGCCACAT GCGCAATGTC CCTCTCTGOC TCTCTCTCTC TTTCGACAAA
23501 TTCTGGTGTG CTCAAGOCAC TGTGCTGAGG CTCTGGCAATG ATOCAGAGGT
23551 GCAAGAGACA TGGTTCTGT CCTGAGGGAG TGAGAGTTTC TGGCTGATA
23601 ATCCAACCAT AGAGCCCGG GAGCTTCAG CCTCTGTCAC CTGTCCTCA
23651 GACCACCATG ACCAGGCTTG CGGTGGGCT CCTCCAACTT GAGGACCGTT
23701 CCTGGGCCAC ATGCCCTCACG CTCTGCGCTC CCTGGAAATCC CTGGTGCCTC
23751 CCTCAACAC CCTCTCAGGT GCGTGTACAG CCTGCTTTC COGCGTGGC
23801 CCTTCCCCCA CCTCTGCTTT TCTGAGGGT GATGTCCTA CAACCTGGTT
23851 TTGATCATCC TGCCTGCAAG TTATCTGGCT TATGTGGCAG CTCTGGCTGC
23901 TTCTGGAGAG TGGGGGAGTG CAGCTTCTTC AOGAATTCTT CAACCTTGAG
23951 AGGCCAATGT TTGCTGATCA ACTTCAGAATG CTTCAGCTC GGGAGAAATT
24001 CTCAAGTGGG GAGATGAATT CGACTGCGAG CAGGGGGAGA CGAGGCTCTG
24051 GGACGGAGGA CGCAGTGAATG GCTCAGGGAG CCTGCGGGGA GGAGGGAGAG
24101 CTATAGGGAG GGGCCCTGA GGGGGGGTGA CTGTACAGT GGGCTTGGC
24151 TGGCTCTCTG GGGACACTTC GCACTTTTGC CATTCTTGGC CAGAAGGCG
24201 TCCCTGCTAG CGCGCTCTG TTCTAAATAT ACATCTCTGT GGAGACTOGC
24251 CTCTATAGCT CAGCTTAAAT GTTCTGTGG CGCACTCTG GGCTGTTGOC
24301 TATGGGGAGG CGCAGGTTTC AGCCCCCAGG GACCCAGTAC GACCCCCCTGG
24351 TTCTTGTGGC ATCCCCAGCA TCAGATTAA GGAATAGTAA GTOCAGGCGA

FIGURE 3H

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

24401 OCCAGCCCCA TACACTGGGA TGCTCTGCAG ATGTGCTTAA TATACCAGAT
24451 AGTGCCTGAT GAOGGGGGTC TATATTCTAG GCGAAGTTC TCAGCCTTGG
24501 TGCTACTAAC GTTTTAGGCC AGGTACTTCC TTGTTGTGAG GCGCTCTCTG
24551 TGCAATTGTTG CAGACATTAA GAAGCATCT TGCGCTCTGC CCACCAAATG
24601 CTGGGAGCAC CCCTCCCTCA GTTGTGACAA CCAGAAATTCTCTAGGCAT
24651 TGCCAAATGT CCCTCGGGT GGGGGGGGC GGGGGCAAATTCATTCGCA
24701 GTTGAAAACC ACTGCTCTAG ACTGCCCCCG CTGCGCTGCA GGAGTTTGAT
24751 GACAGGATG TGAGGATGGT TTGCTATGIG GACAGTCTGA TTGAGTTGIG
24801 TGACTGTGGC TGCGGCGACT GGCTCAOGCC TGTAAATCCCA ACAGTGGAG
24851 GCGAAGCTGG TGCGATCTTG AGGTCTCAGG AGTTCAAGAC CAGCGTGGC
24901 AACATGGTGA GACCTGTCT CCACAAAAAA ATACAAAAAT TAGCTGGCA
24951 CGGTGCGCTCA TCGCTTGTGCT CCAGCTACT GGGGAGGCTG AAGTGGGAGG
25001 ATTGCTTGTGAG OCCAGGAGGT CAAGGCTGCG GTGAGCTGIG TTCAOGACAT
25051 TGCACTCTAA CCAGGCAAC AGAGTGGAGAC CCTGTCCTAA AAATAAAATA
25101 ATAAAATAAAC TTGGGGTTTT TTCTCTAOG CAAATCTAC AGAAGTGTG
25151 CTTAAATGCC CTGTTTGGAA CCTCTTAAGT ACATTTGTTT TTAAAGGTAT
25201 CTTTGTACTT GTTTAGCTG CCTTACTGGA TGCGAGACCT CAGGGCAGCT
25251 ATTGGGTCTT GTGCGATCTTC ATTATCTAG GCACTCAATA AACATTTAGG
25301 GAAATGAATG AGTGCACCCA CGCGAAAGT AGCTTAGGTT TTGTTAGTGG
25351 ACTCTCCCTC CTAAGTTGCC AGCACAGCT TCTTCTCCAA GAAACAAGT
25401 ACTGTATGGA GAAAGAGAAA GAAGGAAGGG ATTGGATGCT CCTTCTCTCC
25451 TCAGGATCTCT GGCGTGTCTC CTGATCTCTT GGAAATGAGT TGGTTGTGTT
25501 AGACCTTCC AGTCAAAAGG GGGTGGAGGG AACCGCTCT AGGGTGTATC
25551 CTAGAAAAAC CATGGCATCT GCGTGGGCTC CGGTTCTCTC TTTCCTTAAA
25601 TAGGTTGAAC AAGATGATG TGAGAGTCTA AGGTTCCAGT GCGCGTTAAG
25651 TGATTCTCTG TGAATCGTGC GCGCGTGTG ACATGCGTTA GTCGCGAGCA
25701 TGTGGTTGTG GATGTTGGATG AGGTGGTTA ACCCTGCGCT AACATTTCTT
25751 TTGTTCTCTG TTTTTAGOC ACTGTATACA TCAAGTTCTG GAGAGTGT
25801 ACCACATCCA CGAGCATGAC ATGCGCACA GGGACGCTGAA GGTACTACCC
25851 AGGCTCCCT CGTGCCTCT GCTCATGAAAG TGTGCGGOC ACCTGGTGOC
25901 AGATAGTGGT ACTGCGTAGG CGCAACTAG GCTTCTCTG GGCGCAGGG
25951 TGGGTGCTCA CGAGCTCTC TGTGTTCTT CTGCGAGCTG AGAACCTGCT
26001 GCTGGCGAGT AAACTGCAAGG GTGCGCGCT CAAGCTGGCT GATTTGGOC
26051 TAGOCATOGA AGTACAGGGG GAGCAGCAGG CTGTTGTTGG TAAGGGTGAT
26101 CCTGTCCTCTC CGGAATGCG GCGCGCCTCT CCTGATCTCTC
26151 CTCCTCTAT TAGAACTAGA AGCCAGACCC TTAATGGTCC TGGCGTCCGA
26201 GATCTCTCTT GCGCGTACCC GACCTGAGTAC AGTAAGCTCA GCGTTGICA
26251 GCACTCTCTT CTGCTGCTT GTGCGAAGGA GCTGGAGTTC CTGGTAGGCA
26301 TACGGCTTGT CGCGTGGTTT CAGATCCAG GCGCTACAAG AAGGCCAGCC
26351 TGTCACTCT TGTGCGCCAT GTGCTGAGAG TTATGTAGC AAAAGCAGCA
26401 CGAATAAGAT CGGACTTGGG CGGAATGGCT CGTGTGGATT TAACCGAGAGA
26451 GAAAGTGGGT TCACTATGOC TCTGCGCTCT CTGCTGCTAC AGGTTTTGCT
26501 GGCACCCAG CGTACTCTG CCTGAGGTC TTGAGGAAG ATGCCATGG
26551 AAAACCTGTG GATATCTGGG CCTGCGGTTA CGCACTOCA CGCTCTCAGC
26601 TTTCGCTGT TAAGGGCCCT CAACTCTCGA TGATGGCAAG AAAGAGGCAT
26651 CGCTATTCTT TGCAGGTCTAC ACAOGTGCCT GGTGTATGIG AAATTTATGGT
26701 GTTTCGCCCCG GGGATGGCTG TTCCCATCAC ACGCTCTCTC CTGGCTACTT
26751 CTGGGAATGAC ATGTATCTT CTGTTGAGAG GGATTTGOCG ACGCTTCTAGA
26801 GGATGGGTG TGCGCTAAAGA AATCCCTGGT GTGACTTGGT GAGGTGAAGT
26851 GTGAGGGATA CGAGGAGGGG CTGCTGAGCAT AGCACTTATCG GCTGGCATCC
26901 ACTCTCTACT CTGCTATGCC CCTGCGCTT CTAGGTGGCT CTGAGCCCTG
26951 CATGGTTTTT CTGCTGCTT CAGGGAAAGTA GCGCTGAC CGCCATGACC
27001 TGTGTGTCT CTGCTGCTAGG GGTGCGATCTG TATATCTCTC TGGTGGCTA
27051 CCTCCCTCTC TGGGATGAGG ATCAGCACAA GCTGTATCTG CAGATCAAGG
27101 CTGGAGCTA TGATGTAAGG ACCAGAGAGC CGGGCAGCGA GGCGAGGAAG
27151 GGCAGATGTC CTGCTCTCG GCGCTGCTOC AAGGGAGGAG GCTTGTGTTAG
27201 TGTGTCACTG GATAOGGGGG TGTCAGGGGA CTTGTAGGAC CGAGGAATGG
27251 GCATCCAGGG CGCAATTCCT GCGACTCTAT GTCGCGAGGG GCAACCTTCT
27301 TTGCAACAGC CTCTCTCTAC ACTAAAAATG AGGAGTCCAC TGAAGTCCCT
27351 TGATCTTAC TTGCAAAGAA TGGGAGGGC TCATGGTGTG GCTGTGTAAC
27401 ACAGGGACAA AAGGCGCTGGA GACTCCCTCC ACTGCGAGTGG CACCGTGGAC

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

27451 ACATTGCTGA GCTCTCTGTC CCTCTCTAAGT ATAGAGCTGG GCCTAAACCA
27501 GAGAATGTTG GAGTCCTCTT CCGCTCTAA TCTGATGTTG TGGCAATTCTA
27551 AACATGACTG TTCTGCTGT CTTCTCTAAGT CTTAAGTTG ACACAGGTTC
27601 TGGAAATAGCC GCAGGGCTTC TOCAACTCTG CCAGTCACAG CTTTAGGTAC
27651 CACAGAGTAT CCTAAATTACA GGAGTTGAGT TGAAGACAGA ACCAGTTG
27701 CAGGGTATGA AGCTCAACAA TACCACATTTC TTCTCTCTT TCTGCTCT
27751 TAGTCCCAT CACCAAGAATGG GACACGGTA ACTCTGAAAG CCAAGAACCT
27801 GATCAACCCAG ATGCTGACCA TAAACCCAGC AAAGGCGATC ACGGCTGAC
27851 AGGCTCTCAA GCACCGTGG GTCCTGTTAA GIGTCCTTGC TAGTGGCCAA
27901 GGAGCTCAGG GGTGTCAGCC TTCTGTTGTC OCTOGGCACCC ACGGCTCT
27951 TCTTACCCAGC AGAGATCAT TCTGGGCCCC AAGCAATAAC TGAGCAGGCG
28001 GGCAGAGGAC TGTGAGGGC CAGGGTCAAT AAATGTCACC AGGGAGACTC
28051 GGGAGGGCTGA TGGGGCTGGT GGGCCACTGTC TCCCTCTCTCC CCGACTCATG
28101 GCTGTCAGGC TGGGATGGT TCTGTTCTTG GATGAGGGCT CAGGTGACC
28151 CTTGTTGACTC CCAGGTAGOC GGTGATAGAA AGCAGCTGGC AAAACCCAAA
28201 GTGAATTCTTCAACCTGGGT TCATACCTAG ATCTCAACTC CACTGGAGTC
28251 GTGACCAAGA TCCAAACAAAT CAACAGAAGG GGTTCCTGAG TCATTAAAAG
28301 CATAAAAGCT GAGGCATAAA GCTTCTGOGC TAAAGTCCTA GGAGAGTCCT
28351 CTAGGCTATC AGTGTGGGTT GACGTACTCT GTTTTATAC ACAATTCTT
28401 CAAGCTGAA TATCAACTTT CACACAAAGA AGAGGATTTC GTAGAGTTAG
28451 GCATCTTGC AACCAAGG CATTATTTAT CTGTCATTTC TGTGTTTATT
28501 AAATACCTCT TTGGTGTGG TTACCGTCTG GGTGCTGGAG ATACAAAGAT
28551 GAATGAGGGCA TGGTCCTGTC CCGAAAGAGT CACCTAGGG ACGAGGCACT
28601 CAAACACGGCA GTCATGTTAC AAATGACAA GTAGGTACAA GAATCTAATG
28651 AGAGTACAGG AGCTCTACT GTCTCTGGTG GGTGGGGGG TTACTGAAGG
28701 CTGCACCGAG GAGGTGACAC CCTCTGCTT GTCTGGCA AATAACGAGG
28751 TCTCAGAAC GTAAACCTGTC AGACAGAGTT TAGCACAGTG AGAGGTTATG
28801 GGAAACTATG GTGAGTTGAA GGAATGTTGA GTGTTGGT TGTCGATGAG
28851 GCTGCAAATA TCAGAAATGCA AGAGAAATGGG GCGAAAGATT CCTGACATA
28901 CAAGTTCTG CCTCAGGAGT TTGGATTTTA TTCTGAAAAC ATAGGGAAATC
28951 ATTTAAGGGT TTAAAGAAG AATGAAATTG GCAATTAAAGA ACACTTGG
29001 AGTTGTGAGG AAATGAAATTG CCAAGGATGG TGGCATGTC CTGTCATCTC
29051 AGCTGCTGGG GATGCTGAGG CAGGAGGATC ATAAGCCAG GAGTTTGGG
29101 CTGCACCGAG CTATGATTGTC ACCTGTGAAT AGTCATGTA CTCCAGCTG
29151 GCGAAAGATGG TCAGAOCCCA CCTCTTTAAA AAAAAAAA AAAAAAGAAG
29201 GGAATTGAAA ATTTTAAAAA GAAAGGGCT GGAGACAGAG AGCTCAGGA
29251 GCTTTTAA TAGTGGAAAT AGCTCAAGCA AGACCAAGGTG AGGTCTCAGC
29301 AGAGGGTAAG GATGGGGGAA TGTGAGGTGT GTGAAATTTC AAGAGATAATT
29351 TGAGAGAAC TAAAGGATTT AATCTCTCTCC AGTTCGATTT GGGGGGAGCA
29401 AAGAAGAGAG AGGCCAGGTT TCAAGTTGAG CGGAGAGTTG TACCCCTACT
29451 GACCCAGAG AAAACCAAGAG GAGGAGCTTG TTGTGAGAC AGAGGATGG
29501 TTTCTCTTT TTTTTTTTT TTTTGAGATG GAGTCTGCT GTGTCGACCA
29551 GGCTGGAGTG CAGTGGGGGG GTCCTACTGTC AAGCTCTGOC TCCGGGTT
29601 ATGCAATTCTC CTGCTCTGAC CCTCCGAGT AGCTGGGACT ACAGGTGOC
29651 GGCACCAACCC CGCGCTAATT TTTGTATT TTAGTAGAGA TGGGGTTCA
29701 CGGTGTTAGT CAGGATGGGT TOGATCTCT GATCTCATGA TCCACCGOC
29751 TCGCTCTCCC AAAGTGTGA GATTACAGGC ATGAGCCACT GCGCCGGGC
29801 AAGATGATGG TTTCTATTG GTGCCCTGCTG AGTCCTGGCAA CCTCCAGCCA
29851 GACACATICA GTGGTGGGT AGAATATGG TCTAGAGAT TAGAAAAGAA
29901 GCTAAAAATT GGAATCCAC ATTTGAGTC TTTCTGTTA GTTGGTAGTG
29951 AGGCTGTAGA AATAGCCCTCT CCTCTATGCTG TAGATGGGGCC TGTCTCTATG
30001 CTGGTTGAGT CTCTACGGTG AGCTCTATT GGCTGTAGTA GAGAAGAGAC
30051 GGCCTACTACA CACCAAGCAIT TAATGATAGG GAGAGTTAGG GGGCCAGCA
30101 AAGAGCACTG AGAGTGGAGAC CTTCAGAAG ACCAGAAGC TAAGAAACAG
30151 GGGGCTCTAG TAAGGGAGGG TCAAGGAATCA GATCCAGAAG AGTCCTGAT
30201 TAAGTTGGG AAGAAATCCC TGGCTCTGAC CATTAGATGC CATTGTTCA
30251 TCATTCACT GAGACAGTGG AGAGAAAGAT GAAACCTGT TTTCAGTGAG
30301 ACGAAAAGGG AGTGTGGGT AGGAGGGGGCA TGGGGAGCTA GGCATTGAGG
30351 TGGGAAATAA ATGGTGTATAC TTAGATTAAG ATGGGCCAGG GGAGCTTTA
30401 ATGTAAGGCT CACACCTGTA ATCCACGAC TTTGGGAGAC CAAGGCAGGC
30451 GATCACTGTA GGCCACGGT TCAAGACCAAG CCTGGCCAAC ATAGTGAAC

FIGURE 3J

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

30501 TCCATCTCTA CTAaaaATAC AAAAATAG CTGGGTATGT TGGTACACAC
30551 CTATAATCCC AGCTACTTGG GAGGCTGAGG CATGAGAATC ACTAGAACCC
30601 AGGAGGTGGA GGTGCACTG AGCAAGATA ATGACACTGC ATTGAGCT
30651 GGGTACAGA GGGAGACTCT GCCTCTAAAG AAGAAAAAAAT TTCTTTTAA
30701 AGATTATAATT GGTCAAGGAGC GGTGCGTCAC ACCTGTAGTC CCAGCACTT
30751 GGGAGACAG GGTAGGTAGA TCACTTGAGC COGGAAGTTT GAGACCAGOC
30801 TGGGCAACAT GGCAAAACCC CAACTCTACA AAAAAAAAAT CTTAAAAAA
30851 TAGCTGGTIG TGGTAAAGTGC OCTTAGCTAC TTGGGAGGCT GAGATGAGAG
30901 GATCACCCTGA GCCTAGAGAG GTGGAGGTIG CAGTAAGGCA TTATTGIGCT
30951 ACTGCACTOC AGCCTGGGCA ACAGAGTIG ATGCTGTTTC AAAAAAAA
31001 AAAAATTTT TTGTTTAAGG AGAGGCTTAA CTATAATCTA TAGAGAAGAA
31051 TCTAGTCCAG AGGAAGAGT TGAAGATCTC TCGTAATTTGA GGAACCAAAG
31101 GTTGGACAG CAGAAAAGA GAGGGGCTC CTGAGCCAAG GGCAGGGGGT
31151 CCATCCCGG GATGACCATG ATCCOCTGA GACTTCTATT AGTGTGGAGG
31201 CAGGTGAAGA TGGCTTGTG AGTGGAAAGTC TGAGCTGAAA GGGGTTCTG
31251 CTGATGACCT CTCATTTGC TTGTTGAGAA ATTACAOOG AGGAGGAGGT
31301 AAAATGAGAG ACTTGGGAA GGTAGAGAAG GTGGGGAGAG TTGCTCOGG
31351 ACCTGGAAAG AGTGGGCAA GGGTGGAGGA AAGGATGOGA GGAGGCOOC
31401 TAGTGTGTTGGT GGGCACTGG CTGCAAGTGC CAGGATTGTG TTTCTGACA
31451 GGCCTGGJGA GACAGCAACA GCAAGGGGAG AGGGAAGCA ACCTGAACA
31501 GGCACCCAAAG AATGGGGAA ATATTCTGTT CTGGGGTCAT TTTGCAAGC
31551 CCTACCCCTCT GCAGTCCCGT GTGCTCOGAG CCCCCGAGGA CAACTACTATA
31601 TTCTGAAATT ACATAATGAT CCTGGTATTG ACACCTGAGT CATTGAGGAA
31651 GTGTAGACTG TGTCCOCATGG ACTCTGTTTA AGGAGGOCAG GAAGITAGCA
31701 GTAAATACAT TGAAGACAAA TTTCATCTCA AAAAAGGGGG GGCACAGTGG
31751 CTCACACCTG TTATOCAGG ACTCTGGGAG GCGAAGTGA GCAAGATCACT
31801 TGAGGTCAAG AGTTOGAGAC CACAGCTG GCGAACATGG CCAACCCGT
31851 CTCTACTAAA AATACAAAAA TTAGCTGGGT GTGGTGGGAT GTGCTGTAG
31901 TCCAGCTAC TOGGGAGGOC AAGACAGGAG AAGCTGAGAG GGGAGGCTA
31951 CGGTGAGCG AGATTGCAAC ACTGCACTOC AGCCTGACTG ACAAAAGOGAG
32001 ACTOCATGCA AAAAAAAAAT AAAAAATTACA TCCAGAATGA TGAAAAGAAT
32051 TGATGCTCTA AGGTGAOGAT OCTTAGCTTC TGGGATCATG GCTTCATICA
32101 GGACCTTGTCTGGGGGTGTGGAGGGGC TCTTGGAGG AGGAATGTC
32151 CTCTGTAGAG AGCAGGAACC CTGGCTTCTCT CTGCTGCTG AGCATCTGGA
32201 AGCGAGTAGG TGCTCAGTAA ACACCTGCTA AAGGAGTGAC TGAATGAGGA
32251 TCACAGCCOC CAGGTACTC TCCCTTCTGG TAGCTCTGT TTOCCAAGGA
32301 AGAATAGGAC GGTCTCTAG CACCCCGTCT AGCATCOGTT ATGGTGTCT
32351 CACGTTCTAG TTGTCCTTAT GTCACCTTGA GTTGGGGTA GTGCTTTTAT
32401 TCTAAAAGC TTTCACATC TGTCACCTCA TTTCATCTTC AGAGCAACTC
32451 TGGGGTGGCT GAGTCATGA CCTGTCCTG GGCATGGTAT CGGTGCCAGG
32501 ACTGTGGAG GCGCAAGAGA TCTGGCTGG GCGCTATAGC CTGCTGTGTT
32551 GTGTTCTAGC AACATGOCAC CGTGGCATCC ATGATGCACTC GTCAGGAGAC
32601 TGTTGGAGTGT TTGOGCAAGT TCAATGOCOC GAGAAAATG AAGGTGAGTG
32651 TGTTTCTAG GCTGOCAGOC TCTTGCACAT CATGCTTGC AOCAGTGIG
32701 CTCTGCCCC ATTTCAGAAG GAAAGCTCCCC TCTTGGCTGG AGCTGGCTC
32751 TGAAGGTGTG ACATGTCACA GGGGAGGGGG OCCAGAGGCC TGATGCTTC
32801 AGGCTCTAGC CAGGAOCCTGC TTTCGCTGA GACCAAGCTG CCTTTTCTA
32851 GGGTCTCTAGT GAATTCACAG GACCTTCTTC TTTCCTCAGG GTGCCATCT
32901 CAAGGACATG CTGCTCTCA GGAACTTCTC AGGTATGTTT TCCAGCTGT
32951 GTACTTGTAT TATGCGAGG TGAGTGGATC AGGAATGGGC TGTTGCCATC
33001 CGGGGCAACCG CTGGGTCTTCTC TOGGGOGCTC GGGCCACACC TTGACCAGGG
33051 CGAGTGAGGA TCTCTTGTG AGGGGCTGCT GCTGCTGCTG AGTCTGCTC
33101 CTGAGATCTA CGGGGTCTGGA CTACATTTG TGAATGTTT CCTAGAACCT
33151 CCCAAGGAGT AGCCTGOCCTA ACTTGCTATG TACCTGTTT CTCTGGATTC
33201 TTATTTAACT CTCTGAAAGAC TCTCAGCACT TTACAGATTT TAGCATTCT
33251 AGGATCTTGG AGGATGTGCT GGGGAAGAA AAGAGAGATG AGGTACAGTG
33301 AGTCCTCTCA ATTGOCAAAT TGCCACCACT CATTGCTGCTG CTGGGACGAT
33351 CTCTTACTTC ATTTCGCTCA AGTGGAGATG ACTAATAGAA AITATTCAG
33401 ATGTTTAAAC CTTTTGTCGC GACTTGTGCT TAAAATAGTC CCTGAGATAC
33451 TAGCTATAAC AGTGAAGAAA TAAAGACAG CAGGAGAGAG GGAAAGGAAC
33501 TTGCTTAAT TTGCTAAAG AATGGGAGA GGTGGGACCA ATAATTGTA

FIGURE 3K

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

33551 AATCATACTT GACATTTATT TTTAAGATGC AAGACACTOC ACTOCCCCCT
33601 TGCCCCCACC CTCACCCCAA CCCTTATTAT TGTGCGCTT CAATTGGAA
33651 GCACAGTGGC TTTTTGTTGA GGAAAAGATT AATGTCGAGA CTGAAGACAG
33701 AGAGGGCTCT GCCCAGCTTG OCATCTOCCC CGGTOCTOCC TOCTCTAAC
33751 CCCTTGCTC ACTGTTTTGG TTCAAGACCC CCCTCTCTCC TTOCCATAAT
33801 AAGACTCTCT CCCTTGCTTC CCCTCTGCAC CACCATGGAA AGGGGGTTGT
33851 GTGGGAGCT AAGCACCAC TCAGTGGGAG CCACCTCTGA ATACCCGTOC
33901 TGCTGGCTC CCCTGGCTG GCTCCAGGT ACGCCAGGGC CTGGCTG
33951 AGGATGCTGC AGGCAGGGAG CCTAGGGCTT CGTGGTGTAG CCTGAGAGOC
34001 ATGGAGCTCC GGAAGGCGAG GGCTGGATAG TGAGCCGGG GCTGGTGGT
34051 CCCTGCGCTC GGCTCTCTOC TTGACOCTG GTTGGGCTTG TGATCTTG
34101 TCATGGTAC CCACGAOGGG CATACTGTGG TGTCGCTCCA CCTCTCGAG
34151 ATGGGAACAG GGAAGGCTGG CTGGCTGCGT CGGGTGGAGT TGCAACTGTA
34201 GTCCACACT TGCTCTCTGT GCTTTAATGA CGCAGCTCT ACITTTTGGG
34251 TCTAOGAGC TTTCAGAGG ACATGAAGG GGGTTTGGGT GTTGGCCCTA
34301 GAGCGAAGCT CTGCTCTCTC TCCOCTCTGA GTTGAAGAAA TTGTAAGACA
34351 GTCTGCTGCT TCTCTTTAG CCAGCAGCT CAATAGCAAG GGCGCTGCT
34401 TGCAGCCCG GGCGCTCACA TCAGCTOCC CCTCCATTTC AGGAAACTGG
34451 CATOCTGGTT TCAGGAAATC GGGTGGTAGG ACAAAGCAIT TTAAITCATOC
34501 CTGTAGAGC TCCCTGTCCTT ATTGGCAGA CCTAGACTGG CCTTGGAGCT
34551 CACITTCGCT TGGGTAGAG GAGACAAACA ATGTTGCAAG CATTCCAGGA
34601 TGGCGCTCTC TGCGCTGACT CTGGACAGG TGAGGACAGA GTCGTCGG
34651 AAGCTTCIGC AGAAAGAGGT GTCTATGGAT GCAATCAAGA AGGAAGGGCA
34701 CCTGTGTTGTT TCTCTAGGG TGTTTTTGA GTTGGACCTOC AATAGGAGAT
34751 GTGGCTTATC CTGGACTCTA GCAGTTGGC TAACAGOOA TOGGGGCTC
34801 CAGAGTGTAT TGCCTCAGCA GCGTTGGTT TCTTTCTCAG GTTTTATTC
34851 TTGGGCACCT TTCACTCTAG CACACTGTGA CACACAGACT GAGAATGCTG
34901 CCTCTCTCGG CTACCTOCC TAAGACAGGG ACCTGTTGCT CTGAGGGT
34951 GGGGGCATG GAGCTGGGC CCACAGTAA ACTTAGCTGC ACAAGGGCA
35001 CAGACCCCTCC CTGGGACCCC CAOGCCAGTC CCTCTAGTGT GTGGGATGTA
35051 GAGAGGGAG AGGGCTGCTC TGCGCCCGCG GCACCTCAT CGTGGGCTCA
35101 TTTCAGCTCT AGGGAGGGAA GGACTAGAAG GGAGGGCGTT TCATCACAGC
35151 CTAAAGCTAG GGCAGGGCTA CCTCAGAAGG GGCACTGOC TCTCACCGC
35201 TCAGGCAATT CGCCTGGAC CCTCCCTOOGG AGGGGGTCA GAGACAGGCA
35251 CTGCAGGCGT CTCCATCTGG TGCGGACGCA GTGTTCCCTA TGCGCTGGC
35301 CAGCGCGTC TTGGCAGGOC CCAGACTGTC TGCGGGCTG GCTGCGCTA
35351 CCTCTCTAGC CTGGCGCTGG CGCTCGCTC CCACAGCTOG CTGGCTTGG
35401 CCAOGCGOC TGGCTGCGC CTGGCGCTGG GGCACTGCTG CTGCTGAOGG
35451 CGGGCTGGCT TTGGGGGGCT CTGTCAGCTG AGAGACTGTA TCCCTCAGT
35501 TGGCAGCGAG AGCTCGCGC CGCGCTCGOC TGCGCGAGC GGCGCGGCG
35551 TTGGCGGGCA AGCTAOGTGG CATAGCTCT CGCGACCGC CTGCGCTGGC
35601 CGCGCTGOCAC CGAACCGAGA GGGCGAGCAT GGCGGGCGCA CTCACCGGG
35651 AGGGAGAGTC CATGCTTGCG GGCAGAGATG GGCACTGCGAG ACAGACTAAC
35701 TAACCTGGCA TCTGCAAGGG CATCGTTGTT ATGGAGCGCC CTAACCAAGCC
35751 ATGCATGCTG GGCGCTTGC AACTTTCAGG GGCGAGTAGC CTGGGGCAT
35801 GGAGCTGGC AGGGGAGCC TTGGCAAGAG CGCGATGCGC TGGGAGGGCT
35851 CGAGCGAAC ACGGGCGCTC AGAGACAGTG CTGGCGATTG CCTGAGCTG
35901 CGGGCTCTA GGACTAGATT TCCCGAGCAC TGTTTAAGAC COCACAGAGG
35951 AGCGCGCTC CTCAAAATTC TGAAGTCTGG CGCTTGCTGG CCTOCAGGTC
36001 TGAAAGGCTC CAGAGTGGCAG AACGCTCAGA CGCAGCTGT TCTGGGCTCA
36051 CATOCTGAGC CTGGCACACC CTGAGCGAGT CACACAGCT CTGGCGCT
36101 TAATCTCTA CCTCTCTAAAT GGGATGATA AATAACATGG TGGTGTAA
36151 GATCACCTG TGAAGGGCTC TCAGCGCTC CTGTCAGTA CAGCTGTTAC
36201 CTGGGACCTC GTAAAGAAGTC CTAATGCGAG GACCGCAOC CAGACAATAA
36251 AATCAGACCC TTAGGGATAA GATAGGTAGT AOGCTTTTTT TAAGCTCCCA
36301 GGTGATCTA GTGGGCAAC AGGGTTGAGA GCTGGCTGGT GAATGGAAAG
36351 CACTTAGACA GTAGGGGGTC AGGCACAGGA GTCAAGCACAT TTAAAAAAACA
36401 ACATTCACAC CGAGCAAGAC AAGATAAGAT CAAAGGCTT TTTCTGGAGT
36451 CAGAATTCTC GTAAATGGAAG GACCGCTGTT CTCACTGGAG AGAGATGGAA
36501 CACAGCTTGG GGAGGAATGG CTACCGAAAG GGCAGGAGGG TGGCACCAAT
36551 AGTGACAAAG ATGGTGGACA CTTACCTAGT ACTTCCTATA TGCGAGGCAC

FIGURE 3L

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

36601 TCTAAGTGCT TTTCATGCAT AATCCCACTG GATTOCCACC ACTGTTTTGT
36651 GATGTCAGCC CTACTTTATC CCAITTTATA GATAAAAGAAA TTGAGGTCA
36701 GAGAGGTAA GTAACCAAC AAAGGTACA CAGCTGGCAA GTGGTGGAAC
36751 CAAGATAACAG ACCCAGGGCA GGCAGTOCAG GTGATCAGA CAGTTGGCT
36801 GATTCCATCT CCCCTGCTC OCCAGACTCTC CCTCCCCACT GTCTGCTACC
36851 TTCCCTGTGGC CTTTTGTGGC CAGCTGGTGT CAACAGCTT CTGGCACAGA
36901 CCTCATCACG CTGGAGOGTC ACCCTATGCC TGCGTAGAAT CTGTTTGACA
36951 CCTCAATTATT CTGGGAGTC CTTCCTGCTC ACAGGTOCAG AGAGTGGACA
37001 CTGGGGAAAG GTGGCAGCT AGGACCCAGT GAACCTGGTG AGGACCTGCT
37051 CAGTGAAGC TTCAAAAAAC TGGCAAAACCT CTCCCTGTAGG TGGTCTGGT
37101 TTCTGTGCT GTGTCCTGCT GTOCTCTGGT CTCCCTGTGTC AACTGTGACA
37151 CTCTGCTCTC TGAGAACACT CAGGAGATGT CTGCACTCT TGCACTTGG
37201 CCATCCAGAG AACTTCCATG GCACCTAGGG ATGGAGOCCT CACTCTTCA
37251 CCTGGCACT CTGCTTCCAG GCCTGGGTGG AAGCTGTCAA AGGCAGAGTC
37301 CCTGGTGGC CAGGGGGCTC CAGTACTGAG CATGGTTTCT CCTCTAAGTG
37351 TGTCCTACCC ATGCCCTCTC CCAGGAGAG GAGATCTGA GGTGOCACCC
37401 TGAGGGCTCT GAOGCCACTC AAGATCCCT TCTTGCTGAG AGGCTATAGG
37451 AAGTGCCTCT TTGGGGGGT TOGGGAGAOC CTGGGCCCCC TTGTCAGACA
37501 CAGCACTCTC TTGIGGATCT GGCTGCOGGA CTTCAGGTG GGGAGAGGGT
37551 ACAATGCAAG AGACTTGATA TTCTCTTTG TTTTACAGC TGCCAAAAGC
37601 CTATTGAACTA AGAAGTGGGA TGGGGTGTGTC AAGGTAAGTG TCTCCAGCT
37651 CTGAACAGAC TGGCCCTCTT CTCCCOOGCAG TCACTATGGG AATTCTGGC
37701 ACCTGGTCC CCTTCTCCA GGGAACTCTC CTATCTTGC TAGTCCTGCT
37751 TAAACCAGAT GCTTCTGTC TCAGAACAGA AGGTTCTGCT GGCTGAGAG
37801 CGAAGTAGGG AGGTATTTTT CCTGGGCOCTA GCTGGATGGG AATGACTCAG
37851 GGGAAAGTGAT CCAAAATCATA GTTATACCA GAGCTGAATC CGGAACCTGA
37901 CTCTACAOG GATGCTTCACT CTCCAGGGCT TGACTCTGGG TTTTTAGGT
37951 CATTGTTTA TCTTTCTTT TTCTCTTTT AGAGCACAAA TCTTTTAAT
38001 CAAATGAAAG CCAAAATTGCT CTGAGTGAATT CAGGCAGGGT ATAGGGCTTG
38051 GAAOCTGAAA CCTACTCTCT TTGGGTCTTT TTOCTCTCT CTACAACACT
38101 TTCAGATCCC ACTGAGTGCA ACAGCTOGA GCTTTCTGA CGCATAGGCT
38151 CCTCAGAAA AGGCAAGGC CATGGTGGAT CAOGGCTTGT TOCCACTGGG
38201 TGAGGGAGCT TTCCCATGG GACTGGGCA AGAGGAGGG ACGGGACOC
38251 ACCAGGAGCC CTGCTGGGA TGGCTGCTTG GCGAAGGTAG AGGAGAGGTG
38301 ACTGGGCTTA CCTCACAGGGC CCAAGACATT CTGAGATGCC TTGGGGGCA
38351 GAAAGGATOC TGGGGCTAGG GCATTGGTA GGAGCTCATG CTATCTGAA
38401 GCGTCCACAG CCTACACTCTA GACTAGATTT CACTGGGCC TTTTCCAAG
38451 ATCTTGCTGTC AACAGCTGAG ATACACACAC AAGGCCCCGT CCTCCCCGT
38501 TCCCTCCCA CCTCCCTCTC TTTCCTCAT TCTCTGCACTG CCTGCTTCTG
38551 TGTTCTTCTGG CCTCTGGCAG GGGAGCTGG GCTCOOGGCA CACCTCTGA
38601 CATGGACCTG CGGGCATCTG CGGGTCCCCA AGCTCTGCCC CTGAGCTACA
38651 TGGATGGAGC CAGGTGAGGA AAAGGGCAG GTTGTGTTGG AGAGAGTGT
38701 TAATAAAGTAC CTGTCAGTCA GATGTCOAOG CAGCATTCTG TTCTGAGGG
38751 TACACAACAG AGGTGTAAGA GGGGGTGTGG CTTCAGTGG CCATAGGAAG
38801 GGGGCGGAC CTGGAGTCAG CTGAGGCTG CTAGTGGACG CAOGCAGAT
38851 GTTTTAGTCC AGGAAGCTCA TAGGAGAGAG CGTACTGGAG AAAGCTGAG
38901 GGACATAGGT GAGACTCACT TTGCACTTTT ACTTCTGCT ATATGTTTC
38951 TTAAATGAA AAAATGGGT CAGGTTGGT GGCTCACTCC TGTAATCCA
39001 GCACCTTGGG AGGCTAAGGC GGGGGATCA CCTGGGTCA GGAATTCAAG
39051 ACCAGCTGG CCTACCTGGT GAAACTCCGT CTCTACAAAA ATACAAAAAT
39101 TAGOCAGTCA TAATGACCGG TGCCTGTAAT CCTAGCCACT CGGGAGCTG
39151 AGGCAGAGA ATGGCTTGAAC CCTGGGAGGC GGAGGTGCA GTGAGCCAAG
39201 ATTGOCCTAT TGCACTOCAG CCTGGGCGAC AGAGCAAGAC TCGCTCTGAA
39251 AATAAAAGAAA AGAGAAAAGA AAACAACATG ACATTTCTAT AACTAAAAAA
39301 CAACAAATT TAATTGTAATG GTTCTCTTTA TACATATTGA TGTTCTCTG
39351 CCTGAGAGA CACAGGGTGT GTGGTAGAATT GATGTCAAA ATATGGTGG
39401 ATCAGTCCTA TCAGGGCAGAA TTGAGAGTTT CTGTCAGA CCATGGGAA
39451 TACCATAGGC CATTGAGCAG GGAAGCTATG GTGAGAGTGC TGATAGAAAT
39501 GATTTGGCAA GCGGGGTGCG GTGGCTTCAC TCCCTGTAATC CCAGCATTTC
39551 GGGATGCTGA GGCAGAAGA TTGCTTGTAGT CCAGGAGTTT GAGACCAGOC
39601 TGGGAAACAC CTTGTCCTG AAAAAAAATTA ACTGGGCTA

FIGURE 3M

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

39651 GTGGTGTGCA TCTGTAGTC CAGCTACTTG GGAGGCTGAG GTAAGAGAAAT
39701 TGCTTAAGCC CAGGGAGTTT GAGCCCTGAGG TGAGGCAAGA TCAAGCCACT
39751 GCACTCTCCA GCCTGGGTGA CAGTGAACAC CTGCTCAAA AAAA
39801 AGATACCCTGC TGTGCCCTA GAAGTGGGA AGGCACAAACT TAATCTACT
39851 TTTAAGGTGT TTACAGTGGG AGAGACACAA GGCAGCTACT GTTCTATGG
39901 AGTCTGCTAA GGTCTCAGGG AGGTGTGCACT CTGGCAGGTG CTGGGGAGC
39951 AGACAGATAA ACATCCAAAC CAGGACAGGA ATCTCTGGA AGGAGATGCC
40001 CAGGAATIGA CCTTGTGAGGG GTAGCTGGAT TTGCTGGGT TAAGGAGGAG
40051 ACAGGAGGGG AGGGATATTC CAGGAGAGG GAAGAGGCCA TGTAAGATA
40101 CACGAGGTG AAACAGCACT ATGATCTGG GAACTCTAGT ATCTCTTAA
40151 TGGCTGAAGG GAAGGAAAT TGCTAAAAAT GAGACCTGAA ATAAAGCAGT
40201 GACTGTGAG GTGGAGGGG GAGGATGGAA AAGGCACCAT TACAGAACAG
40251 GTTCTAGCC AAACCTCTA GATACTACTG GTGTCAGA TGAAGGTCAT
40301 GTGAGGCACT GTAAAGGATG CCGAAGGAGC CAGCTCAAC CATGCACATC
40351 CAGGOCOCAG CTTGGAAATTG ATGTTCTGGA GGCCTTGCT GGGAGGAGA
40401 ATCTGTGAAT TTAAAAAACCA CTTCTATGAA TCCAAAGCAC ATGAAGGTTT
40451 AAGAGTCIGG TAAAGGCAAATTTGGGT TATGTGTTAA GAAAGGGCTG
40501 GAACAAGAGT CGGCAAGGAA AACAGAGGAA GGACAGAGAG GTAGGGGGAA
40551 AAGAGAAATG TGCAAGAGCT GCAGCTCTTC CAGGAACCC GAGGATGAGG
40601 GCTGGGAGA CACATCAATTG GTAAAGGCT TTAAATGAGG AGCTGGTGG
40651 GGAACTCTGC CCTGCAATGT GTTGTGIGTC TGACCCCTGAT ATGTGGCTCAG
40701 TAAATGAGT TTATGOCACA TTCTTTGAG AAAAGACCTT CAATATCAIG
40751 GTGGGAACCA GAGCCAAATG ATCACCCAAA ATIAAAAGGC CAACGGGTA
40801 TTGCGAGCGG TTGTGATGGG AGGGGTTAAT ATTTTATATG AAAGAGTTT
40851 TGTGACAAAT AATCCCTCTT AAAACCCAGT AGAAGCTGGG CGGGTGGCT
40901 CACGCTGTAA ATOCAGCAC TTGGAGGG CGAGGGGGT GGATCAOCAG
40951 GTCAGGAGAT CGAGACCACT CTGGCTAAACA CGGTGAAACC CCATCTCTAC
41001 TGAAAATACA AAAAATTAGC CGGGTGTGGT GGAGGOGCC TGTAGTOCCA
41051 GCTACTTGGG AGGTGAGGC AGGAGAATGG CGTGAAACCG GGAGGOGGAG
41101 CTTGCAGTGA GTGAGGATTG TGCACTGCA CTCCATCTG GGTGACAGAG
41151 CAAGACTCCG TCTCAAAAAA AAAA
41201 TAGGCTAGGT GTGGTGGCTC ACATCTGAA TCCAGCACT TTGGATGCT
41251 GAGGTGGGCT GATCACTTGA GGCGAGGAGT TGAGGACAG CCTGGCCAAC
41301 ATGGTGAAC CCCTCTCTA CTAAAAATAC AAAAAGTAGC CAGTAGTGT
41351 GTGTCACGCC TTGAGTCTCCA GCTACTCGGG AGGCTGAGAT AGGAGAATCA
41401 CTTGAACCTT CGGGGGGCC GAGGTTGCG TGAGCTGGG TTACACCACT
41451 GCACCTCAGC CTGGGGGACA GACCAAGACT CTGCTCAAA AAAA
41501 AGGAAGATAG ATGATCAAAG AAAAATAACT GACAACCTGA AAACAAGGAA
41551 GTAGAACTGG ATAACAAATG TGGAAAAATT TCTAGCCTCA CTAGTATCAG
41601 AGAAAATGAA ATTGAAACAA GGTGCCATT TTGGACTCTA GTTGTGATG
41651 GTAGTGAAGG CCGAGATGGT CCTTCTIAAA ACAGCTGTG TGCTAAAACC
41701 ATAAAAATGC TTCTAACCCT TTTACCTG TTAATTCTAC TTCTGAGAGT
41751 TTTCTCTAAA GAATAATTG AAAAATAGGAA AAAGCTAAAAA CGAGAAAAAT
41801 GTTGAACATG ACAATTATTA TAGTGTGGG AAGATTGGG GCTGGGCACA
41851 GTGGCTATG CTGTATCT CAGCACTTG TGAGGCCAG TTGGAGGAT
41901 TGCTTGAAAC CAGAGCTTG AGACCACTG GGGAAAGTA GTGAGACCCC
41951 ATCTCTAAA AAAA
42001 GTAGTCCCCAG CTACTTGGG GGCTGAGGTG GGAGGATTCG TTGAGGCCAG
42051 GAGGCTGAGG TTACAGGCCAG GATCACACCA CTGOGCTCCA GCCTGGGTGA
42101 CAGAGTGGG CTCTGTTAA AAAA
42151 AAGATGGAG ACAATTGAA AAGCCAGTAA GGAGOCAGAC ACAGTGGTGC
42201 GTACCTATAG TCCAGCTAC TCAGGAGGTG GTGGCAGGAC AGAATTGCTT
42251 GAGGCCAGGA ATTCGAGGOC AGCTGGCAA CATACTGAGA CCCCCAACTC
42301 TTAAAAATGT TTAAATTAAAGG AAAAATTTAA AGATTGTTAA AAAGCCAGTA
42351 ATGACTAAA TAATTATGGG AAATCTACTT AATAAAACTAT TCAAAAGTTA
42401 TTAATTCTCA TGACCGTAGG GATAATTAA GTGAAAATA AAGTGCAGAA
42451 ATGTTTATA TTAAGTGAAG GAAGTGGTAT ATAAAGGAGT ACAGACAAGC
42501 CAGGCAOGGT GGCTCAAGCC TGTAATCCCA GCACCTTGGG AGCOOGAGGC
42551 AGACAGATAA CGAGGTCAAGG AGATOGAGAC CAGCTGGGC AACATGGTGA
42601 AACCCCGCTT TTACTAAAAA TACAAAAAATG AGCTGGGCGT GTGGTGGCT
42651 GCCTGTAATC CCAGCCACTT GGAAGGCTGA GGAGGAGAA TGTTTGAAC

FIGURE 3N

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

42701 TAGGGAGTOG GAGGTGOGG TGAGCCAAGT GGOCGACTGC ACTOCAGCT
42751 GGTGACAGAG CAAGATTCCTG TCTCAAAAAA TAAAAAAAAGGAGTACA
42801 TACACTATCA TTCTAAATTT GGTTGAAGA AAAGTGTGTTG TAGATAATTAA
42851 TTCAGTATAT AATAITGTGGA TAAAAAAGGG ACTGGAAGAA AGCCCACTAA
42901 GTGTCAACAG TAACCTCACC AGGTGATGGG AATTTGAGAA ACITTTTTGTC
42951 TTACACATT TTCTGTTAATC CTATAATTTC CATCTAGATT GTGCACTACT
43001 GTTATCAGAA TTTTTTTAA ATACTATTTC TTITTTAAAG TAAAGCATAA
43051 TACCAAGGTG GGCACACTCAT GCGTGTAAAT CCCAGCTACT GCGAGGCCTGA
43101 GGTGGGAGGA TTGCTTGAGC CCAGGAGGT CAGCCTGGGC AACATAACCA
43151 AGACTCCATC TCAATTAAGA AAAAAAGAAA AGAGGTAAGA CATGTCCTTG
43201 TATTTATTATA TCTTATAATG ATATCTTTT TTGTTGTTTG TGAGACAGGG
43251 TCTCACTCTG TCCCCCTGGC TGGAGTGTAG TGTTGTTGATC TTGGCTACT
43301 GCAACCTCG CCTCCCGGGC TCAAGTGTATT CTTOCCACCTC AGOCTCTGGA
43351 GTAGCTGGGA ATAOGGGCAT GTGCCACAC GCGGGCTGA TTTTGTATT
43401 TTTAGTAGAG ACGGGGTGTC CCAGGCTAGT CTGAACTOC TGAGCTCAGG
43451 TGATCTGCCG CCCTCAACCT CCTGAAGTGC GGGGGTTACA GGCATGACCC
43501 ACCAOGCTG GCCTATAATG ATATCTTAA AGATTGCTTT CTTTTTTTT
43551 TTTTTTTTTT TTTTTTAGAC GGAGTCTCAC TCTCACCCAG GCTGGAGTGC
43601 AATGGCATGG TCTTGGCTCA CTGCAACCTC CGCTCCCGG GTTCAAACAA
43651 TTCTCAACC TCAGCTCCG AAGTAGCTGG GACTACAGGC GGTGCCCC
43701 ACACCCAGCT AATTTTTATA TTTTTAGTAG AGACGGGGIT TTGCTATGTT
43751 GGCAGGCCTG GTCTCGATCT OCTGACCTTG TGATCCACCC CGCTCAGCT
43801 CCCAAAGTGC TGGGATTACA GGCAATGAACC ACGTGGCGG CGCAATTGCA
43851 TTTTTAAAAA AGACTGGAAG ATTGCTAGGA GTATTTAGGG TTTTCCATG
43901 CCCCTCTCT GTTTCCAAA TTGCTTGTAT TGCGCTGCA GTCCTTTAT
43951 AATATGAAAC AGCTAAATAA CAACTTATGT TGCGCTGCA TCAAACGGGT
44001 GAGAAACGAA AAGGAGAGGA CAAAGCAAGA TGTGCAGAGT TOGACCTTTC
44051 CAGGCTCTCT CAAAGCTCAAG GTTGTATCA ATGTTATGAG GGAGGCTGT
44101 GAAGTAGCTC AGATGGCTT GAGCTTCAG CATCATGGAT TCTTCTTTA
44151 GATCCCATCT TCCCTTCCA ACTCCCOCTT CCTCAATTCC TACTGCTTAA
44201 GTGTCCATAG GGCGATTCT TTTTCACTGT TCAGAAGCTT TCTGCAAGAT
44251 GTTCAAATAA CTAGCATTGG TTGAGCAGC TAGTCCTGCT TGTGTTCTG
44301 ATTTGGGGGA CTAGCTCT AITTAGATT CTTTGAGCT GGATGCCAGT
44351 GACCCAGGGT CTATGGAAGA GTAAGACCA CTGTTGAGGA TGACTGAAGA
44401 GGCACAAAC TCTCAGATCC TGAGAGTGTG GGCACAACTTG TGCCCTCTG
44451 TAGTOCCAGG CCAGAATGGC CATCTATCT TTAAGGAGA AAGCAACCAA
44501 GAAAAACGAA AGCTTATAGT TATTCCTCA AGTACTATTT GAAITATTIT
44551 GTTAAATTAATGATGAGAAA GAGCTTGTAA CGCTTTTCA GCTTAAATT
44601 TAAATAATAAT ATACAGTTTT TAAGTAAAAG TGAGATATGA TTCTTTAGAA
44651 ATCATCTGGC ATTTAGCCAG GCATGGTGGT GTGCACCTGT AGTCTAGCT
44701 ACTCAGGGTGG CTGAGGCAGG AAGATCCCTT GAGCCAGGA GGTGAGGCT
44751 CCAGTGAGCC ATGATCATGC CAGTACTCTCA GCGGGCAA TAGAGCAAGA
44801 CCTTATCTCT AAAAAATAA TAAAAGACCC TCACTTTAG ACAATGTGGT
44851 AGTGTGCTGG TTCAGAAGGA GCGCAGCTAT GCATGGCTAA GGGCAAATCC
44901 CTGAATGGAG AAGGAAATTC AAAATGTG ACTAACCTGA GAAACAGTCT
44951 TTGGAAAAGG GTGATCTCAG GTTCTCATGC AGGACAAATT AGGAAAAGA
45001 GAGCAAGCCA GGAGAAGGCT GAGAATTTTACCTTACCTTACCTTACCTT
45051 GCTTTAAGTC AAGATCTGC AATGGCTT CACAACAAGC CGCTGAAAAT
45101 CAGCAGAACCA AAGACTGGGC CTGGTGAGTG AGTGCCTAAG CAGAGTCTT
45151 GCTGCGCTGTA TTTCAGTGAA GTTAAACCG TGCGCTCTTC TTAGCTGG
45201 GGAAAAACCA AAGTCAGCAA ACCCAGCTCA ACTCAGCAA CTTTGTGCG
45251 CTGTATGCTA ACTATAAGGC ATGTGTGCTAG GTACTGTGGA AATTGTAAG
45301 ACACATAAGA TAGAACCTT CCTGAAAGCA GTAACACTTT AGTGGTAA
45351 AGGGATAAGG AGATATACAC ACACACACAC ACACACACAC ACACACAC
45401 CCCACTACTT ATATATATGA ATATAAGGGG ACTCCCTCTT TTTGAGGGAT
45451 GATTITGAGA GTAAAATATC ATATTTGAGC ATATTTAAA GGOCACITGA
45501 AGGCTGTGIG CGGTGGCTCA CGCTGTAAAT CGCAGCACCT TGGGAGGCG
45551 AGGTAGGTGG ATCACCTGAG GTCAAGGAACT CGAGACCCAGC CTGGCCAA
45601 TGGCGAAACC AGTCTCTCTA CTAAAAATAC AAAAAAAAT CAGTGGGGG
45651 TGGTGGGGGG CGCTGTAAAT CGCAGCACCT CAGGAGGCTA AGGCAGGAGA
45701 ATGGCTTGA CGAGGAGGC GGAGCTTGCA GTGAGCOGAG ATGGTGGCAC

FIGURE 30

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

45751 TCCACTOCAG CCTGGGCAAC AGAGTGAGAC TCCCTAAAAA TAAATAATAA
45801 AATAAATAAA TAAATAAATA AATAATAAAA TAAAAGGCC ATGTAAAAGA
45851 GGCTTAAC TAATTAGGIT TTCTTTTCTC TTAAATCTA ATTCTAAATT
45901 ATGGACCAIT GTCAATATTT GTAGCTCTT TCGITGATTA TAATAATAAT
45951 CCCTGAAAAT CCCTCTAAA GAATGCTGGC CGCTTGAGGG CAGGAGCAGT
46001 TTATCAGCTG TGTTTACCTG AAACAGCCCT CAGTGTCTGC TGGCAITGT
46051 TAAATGAATG TGCAAAGTT GAAOGACAGA CGGACATATT ACAGGGGGAC
46101 CTTAOCOCCA GTGAGCTAAT GATGACATTG ATAATTAACCC TTCACTTTT
46151 AGACACAGTC TTCTGGATA TATTTCAGT GTTCAOGTG GTCCTCACT
46201 TGATGCGCT GTTTCACATG TGAOGTAAA GTCGTGTGAGC ATCTAGTTGA
46251 GGCTGAGGAA TCACITCCCT CAACATTCCCT GTGCGCTTAC ATCCCTGCAT
46301 TTCTATGATC ACITGAGTT TAATCACTGG CACTCTGTG TTCTATT
46351 CCACGAATG CAAAATGCAA TAAAAAAATTC AAATATTGTA ACAAGCATG
46401 GCTATACTGA CAAAGGAGG CCAACATTAA ACTGCTAGGT GATTTCAAA
46451 AGCTCAGCTT CTTTATGTA AAACCATAGT AGGGATGAG CAAAGTCAGA
46501 AGTCAAATTT TATTAGACCT GAGGAGAGCC TGTAGTAGCT TTGCTTTT
46551 CCCTGGTGGC TGCTCACTTG AATTCAGAC AGITCTAGTA ATGAGAGAAA
46601 ATAAATAACA TTACAGGGTG AGCTAACCCCT ATGAACCCAG ACCTGTAAAT
46651 TTGTAGCAAA ATGATACCTA ACCTCACAGA CTGCTGTCTT AATCTCCCTA
46701 AGAGGCTTTT TTGAGCAAG GCTGAGACAT CTCAGAGAT ACTAAATCTG
46751 TGCTATGAA CCTGACACAA AAAGAGTTCT TCCCTCCAG GGTCTGGAGG
46801 GTGTGAGTGC CTGTCGGTCC GTGTGCTGTT TAAACCCCTTG GTGCTGGACT
46851 CGGGGTCTCC CTCGCTCTT TTCTCCCTGA TGCAGAGCC ACACTGGTGC
46901 GCTAACCTGC AGOGCTCTG TGCTCTCTT CTAACTCTT CTTCCCCCT
46951 CTCCTTCCCT CTGCTGTGG TGCTGCCAGA AAAGGAAGTC GAGTCCAGC
47001 GTGCACCTAA TGGTGAACCT TGCTGCCCCA CCCATGCCCC ACTOCATGCT
47051 GCTGTGCCCC GCTGCCCCAGC CAOCCAAAAC TGTTCTGCA CGTGGTGTG
47101 CCTCACTCAT CCTCACTGC TGCTGTGCT GTGTGGGAG GTGTGGCTG
47151 TCCCTGCCAGG CGGGGGCAGT TCCCAAGGT CACCCAGTAG CCTAAAAAGT
47201 GGACATTGGA AGGGTGGTA CGGCAACCCCC TGCTGTGGAG CTGGACAGA
47251 CCCAGOGAC CGAGGGTAGG ATGIGAAGCT GGTAGGGACT TGGGCAAGC
47301 AAGGGAGAGA CCCTCACTCT CTGTCACCC AGAAGGAGAG GCGCTGCTC
47351 CCAGGCAATGA GGASCTGCTT CCTACAGACT GGCAGCTGGA GGGCAACTGT
47401 GTGGTGGGCA GAGGAGCTGG TTGCAAGCTC CCACITGTGA GTCTCGCTCT
47451 CCTGGCTCTG CGGGGGCTGCA AATCCCAATTCTC TCTCTAGCTG TGCCAGTGG
47501 TTCTATCTGC CCACCCAGCC CTGGGGGGAC AGCTAACCTCA TCTTCTCACC
47551 CGGACACTGG CCACACAGGA CGCTGAGTCA TTATGAAACC
47601 ATCCAAATAA ACCAGAGGTG GGGGCGGGGC GOGATGGCTC ACGGCTGTAA
47651 TCCTAGACT TTGGGAGGCC GAGGGGGTG GATCACAAGG TCAGGAGATC
47701 AAGACCAATAA CACGGTGAA CCCTGTCTCT ACTAAAAATG CAAAAAAATT
47751 CGCAGGTGTC TGCGTGGGCC CCTGTAGTCC CAGCTACTCA CGAGGCTGAG
47801 CGAGGAGAAT GGCGTGAAC CAGGGGGGG AGCTTGCAGT GAGCGAGAT
47851 CGGCGCACTG CGCTCCAGOC TGGCGACAG AGCTAGACTC CGTCTCAAA
47901 AATAAATAAA CCAGAGGTGG CGCACTTGG GTGACATOC AGGCGCTCTGC
47951 AGTTTGTG GGCACCTGAG TCTCTGTGOC CCTGTGAGG GTCTGGCT
48001 CAGCTGGGAT TTACAGGTAG GGCACCOCTC TCTAACCAAC CGGACACAGG
48051 TCAGCATCAT TCACTGAGCT AGGTGGCTT TGCTCTTGG TGGGAATGAG
48101 AGACAGCAGA GCTCCCGTGA GTTGTAGACCC ACGTCTCTCAC TACTCTGGG
48151 CGGGCTCTCTC TCTAGCTGT CGCAGCTCTG GTGAGCTCTGT TCACTGGAGT
48201 CACTTGGTGC CTGCTCTGAG GTTCCATGCC TAGCCCTGGG TTGCTGGGATG
48251 TCTGAGGCCAT TGACAGCAAG CTGGGGGTGG AOGGCCTCTAG GTCTGGCTCA
48301 AGAGGCTCC AGGCAAGAAG TAGGACAGTC AGGAAGCTT CTGCTGTATGT
48351 CCTAGGAGAG AACACACACA TTCTAGCTGT CGATGTATCA TCTGTGCCCC
48401 GTGCAGGGAT CGTAGGCCACA CATTGTCTC ACTGCTTATT GAAGAACCTG
48451 CAGGCATCAG GCTGCTCTC AGTGGGCCCC AACCCACTG GAACTCAGTG
48501 AGATGGAGTA CGCTGGTAG GGAACATATCA GAGGCAAAGA ACATCACATG
48551 GATATGGCTC CCTGCOCTGG AGATCAGCC TCTCTCTCTC TTOCATCTCTC
48601 CCCTTGGCCCC TCCCTGTGTC TGCCCTCOOG TGTAATGTTT TTGTTGTTC
48651 GTTGTCTTTT GGTTTTTGTG GATGGAGCTC TGCTCTGTG CGCAGGCTGG
48701 AGTGCAGTGG TGCAATCTG GCTCACTGCA ATCTCTGCTC CCCAGGTCA
48751 AGCAATTCTC TTGCTCTCAGC CTCCCGAGTA GCTGGGATTA CAGGCACTG

FIGURE 3P

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

48801 CCACCATGCC CGGCTAAATT TTGTATTTT AGTAGAGAAG GGGTTTCACC
48851 ATGTTGCCA GGCTGGCTT GAACTCTGAA CCTCAGGTGA TCCACCGGCC
48901 TTGGCCTCCC AAAGTGCTGA GATTACAGGT GTGAGGCCACC GTGOCACCC
48951 ACCCACCAG TAGTTTGAA AGGAAGGAG ATATCCTGG TGGTCATGGT
49001 GCTGTTGGGA ATGTTGGCT GTGTTGGCCT TACTCTGTOC TGGGGCTGG
49051 ATTCCTGGAC TACAGCTACA GOCOCGCTGG GTTTCACCTG CCCTCCCG
49101 GAACACTGCC CTCTAGCTG ATCAGGCTA AGAATTGICA GACAAAAAGG
49151 TGAACACAC AGTCTGACT CTGCTCCTG AGGTCACTGA ATGCAATTG
49201 TGTCTGAAG GGACTCTCAC COCCATCCTC TGACACCAT CTCCTAGGCC
49251 AGGCATACTT TTCTTCTCCT CTCCTCTT GTTTCAGGCT TCGAGCTGGT
49301 GTTGTAAAGA GGAAATACAG GTGCTGGGTT GAAAGTGCAG CAGGAGACTG
49351 CCCACAGATA GGGGACACAG GTTCTGAAT TTGTTCTGC TTCTTATAA
49401 ACTACCCCCC TTCTTCTGT ACAGTGGAA GAAGATCTG AACTCTTIG
49451 GGTCAAGGTG GGAATTGCA ATGACCTGGC ACCTGGCATA ACCAGAGATT
49501 TCTGGAGGGT TGCTTTAAA CAAGGCTTIG GGCTGGTOCC ACCTTGAGGG
49551 TGGCCCCAGA GCTAGGTCTC TGGGCCCCAC AAATACTTCC TCTGATCATC
49601 TCTCTAGCCA TOGCTCCAT CTACACAGCG TTATGGAGC CACCTCAGGC
49651 CTACCTCTC CAGGOCAGAC CAGGGGGCAA GGGAGGTCTG GGAGTTGAAC
49701 CTGAGTGCC TTTGGGACTC TGGGAGGAAT AAACCATCTG TTTCCTTGTC
49751 TCAGGCCACAG AGCAACAACA AAAACAGTCT CGTAAGGCCA GCGCAAGAGC
49801 CGOGCGCTT CGAGAOGCC ATGGTAACTC CTGACTACAG CTCTCCGCC
49851 TCTGACCTG GCTGOCCTCT GOCCTCTCCC TCTTCTCT TCTGTGCC
49901 CTCCTGGCC TCTCTGGCTG TTCTTCTCTT GGTCCCCATA GAACTGACTG
49951 CTTTGTGTCG CGCCCTGTAT GOCCTCTCCC CTCTCATGTC CGCGCTGGCC
50001 CGCTCTACCC CGCCATGCCA GAAGTGCCTGC TCTCTGCTCT GCTCTTTG
50051 CTGGTGGGGG GAAGAGTGT CAGGGCTCTC AGCTGAACCT CGCAGGCCA
50101 GOCAGGACC CCTAGTGGGT CTCCTGTGGG GGCTGGGAAG GTGAGTTGCT
50151 TAGGAAAGGA GAGGGTAGGA CCTTCTTGG GACCTGAACA TCAGTTCTG
50201 GAGGCCCCCT TGAAACACT GCTCAGCTC CTCTTTGCA AAGOCAGAAA
50251 CAGGAAAGAG GGCTGGGTC CCCACCTCTG GATGGTGCTG AGGTCTCCAG
50301 GCTCTGGAG TGCTCTCATGC TGGCTAAGTT CTCTCTGGGC TCTCTCAGGG
50351 GTTCTGTGTC CTCTTGGAGG TCTCTCTGCT AGTGGTGGCT AACTAGAGAG
50401 TCAGCAGGGG GGTCACTGGG AAAAGAGGGAG AGGTGATGTT CGCTGCTACT
50451 CGCCCTCTTG CGAACCTCA TACCACTGAA CGTGGGGGGGG TGGGGCCAGG
50501 AACTAGGGAA GCGAGAAGGC GGGGGCAGTG GGCAGCTCTC TGGGCTCAGC
50551 TTGCTGAGGGG GCGCTCTGT CCTGGCTCTT TCTGGAGAC CTCACTCTC
50601 TGCCCATGTT CCTGOCCTCAC ACACTTCCC TGATGAACGC TGIGGGGGGG
50651 CGCCGGCTG TGCCCTCAGT COCACAGCTC CTCTAGTGTAA CCTGCCCCGT
50701 CGGAACCCA TGTTGAAAGA GOCCTCAGAA CTGACAGGAA TCAGGGACAG
50751 AGGCGCTCCTG TGTCAGCTCCTG CTGGCACCT GCACCTGOCAG GGOCTCTCTT
50801 TCTTACCCAG CGAGTGCCTGC TGCCAAAATC CAGGGCTATC CGACCTGCC
50851 GGGACCCCCAG TTGAGCCTGGG ATATTTGTC TTCTGGAGAT GGCTGGTGGG
50901 CAGGCGCTAG TGGTCATCAT AGGGCTCTG GGGGTCTCTGG GTGCGAGGTG
50951 GGGCTCTCA GGGAAAGGCC ATAGTCTGTC CCCAAGTOGG AAGGGTAATC
51001 TTCACTCTCT CTCACAGGAG CCACAAACCA CTGTGGTACA CAAOGCTACA
51051 GATGGGATCA AGGTGAGTGG CTCTGAGCC TGCTCTCTGC TTTCAGGTC
51101 AGCAGGAGAC AGGTGGGCTG GGTCCCAGGG GTCTACAGGC TGCAACCTGA
51151 GGCCAAAGTG TTGCGAGAGG CTCACTGAA GGTAGCTGTG CGCACAGIT
51201 GCTCTCATGCT GAGGAAGGCC ATTTATACCTT ACAGAGCTCA GGCTTCTCAG
51251 TCAGACAGAC CTGGCTCTGAA TCCCTGGCCCT GCACCTTGTAT ATCTTCTTATC
51301 TGCAAATTTG CGATGATAAT AATAGAATCT TCTCTCATAT GTGCGAAGIT
51351 TAAATGAGAG TAAACGCTCA CTGAAAAAAT AGGCAAGAGT ATCTCCAGAC
51401 CCTGGAGCGT TCTCCATGGC CTGACCCCTT TGTCCTCTG ATGTTTTCAC
51451 CAGCACTCTG GAACATCTGT TAAGCCAGA TACCATCCAT GGCTCTGGCT
51501 TACAGAGGTG ACAAGACAAA TTATCTGTTA AAAACGGTGGG TGGGATGGGA
51551 GGCAGATAAA AAACCAATAA GCAACAGAT AAGATAAGCT GGGCACCGTG
51601 GCTCACACCT GTAACTCTCA CACTTGGGA GGCCAAAGGTG CGCAGATOGC
51651 CTGAGCTAG GAGTTAGAGA CCACCTTGGG CAACATGGTG AAAACCTGTC
51701 TCTACTAAAA TACAAAAAAG TAGGAGGTG TGGTGGGGGG TGCTCTGAGT
51751 CGCCAGCTACT TGGGAGGCTG AGGCAAGATA ATTCGCTTGAG CCTGGGAGGT
51801 GGAGGTTGCA GTGAGCTGAG ATCAOGOCAC TGCACTCCAG CTCTGGCTAC

FIGURE 3Q

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

51851 CCAGTGAGAC TTAATCTCTC AAAAAAAATA AATAAGATAA AATCTAATGT
51901 CAATAGGAA TCTGAGAGAA ATGGCAGAAA GTAGAGAGAG GGCGAGGTGC
51951 GGTGGCTCAT GCCTGTAATC CTAGCACTTT GGAGGCGAA GGCGGGCGGA
52001 TCACCTGAGG TCAGGAGITC AAAACCAGCC TGCCAAACAT GGCAAAACCC
52051 CATCTCTACT AAAGATACAG AAATTAACCTG GGATGGTGG CACATGCTG
52101 TAATCCACAG TACCTGGAG GCTGAGGCAG GAGAATGCT TGAAACCTGGG
52151 AGGCGGAGT TCCAGTGAC TGAAATGCTG CCACITGCACT TCAGGCTGGG
52201 CGACAGACCA AGACTCCTAC TAAAAAATGA AAAACAGAAA AAOCTCACCA
52251 AACTAGACAG AGAGACACAGG GCGTGAATT AAGTAGTCAG GAGAGGGCTT
52301 CTTTCAGGAG GTGATATCTG AGCTAGAAC TGAAATGGTGG GTGGGAAGGA
52351 GGCGACOAGG OCAGCTCTGA GCGTGAAGTGC CCTAACAGAGA AGGAACITGAA
52401 GCTCAGATG GGCCTTGTG ATCAAGCAGA GGGAAAGAGA AAGTGAGACG
52451 GGGAGAACCA TAGGAGATG ATGAGGTGG AGAACCGAGA GGGCCTGCTA
52501 CAGAGGCGCT TGTAGGAGTT TGCATTTCCT TOCACCGAGA AGGAGAAAGCT
52551 ATTGGGAGTT CTAGCAGGA GTAACAGAAAT CTAGTTGACA CTITAAAACA
52601 CCACCTCTGGC CTCATGATCA AGAACITCTAG GGAGGCGCOGG GCGTGGTGGC
52651 TCAOGCGCGT AATCCCTGCA CTTTGGAGG CGAGGGGAGG TGGATCAGCA
52701 AAGGTCAAGG GCTGAGACCC AGCCTGGCCA ACATGATGAA ACCCCATCTC
52751 TAATAAAAT ACACAAATTA GCGCAGGCAATG GTGGCAGGCA CCTGTAATCC
52801 CAGCTACTCA GGAGGCTGAG ACAGGAGAAAT CACTTGAACC CGGGAGGCAG
52851 AGGTTGAGT GACCGAGAT CATGCCATTG CACTCCAGCC TGTTGAAACAA
52901 GAGCAAAACT CTGTTCAAA AAAGAAAAAC TCTAGGGAGG AGGTAAAGTGT
52951 CGAAGITAGG GAGAACATGA AGCTGTTATC ATGGTTCAGG TGTTGAGATGC
53001 TGGTGGCTG GAGTCAGGTT GTAGCTGTG ATGGAAAGTG AAGAGGTAAG
53051 ACATGGGTT TACTTGGAG GCAGAACCCAG AAGATTTTAT TTTAGATGG
53101 GCGATCTGAA TATAACGGAA AAAGAGAAAG AGAAGGATTG AGGATGACTC
53151 CAGGTTTCTAG OCTGAGTAAC TGGTAGATG GTGGCAATTAA CCAACTGGGG
53201 GAAGACTAGG GAGGGATTTT GGGAAAGAGTC AGACAGCCAG GGTGGAAGCA
53251 GAAOCCTCCA CAATTOCTCC TTGCAOCTCT TGTAGGAGCA GAAACTCTGC
53301 TTTTGTCTG CTTTGTCTCT CTGGCTTOCA AGGGATGGG CATAATAGAAA
53351 CATGTTCTTT TTGGCCTACA GGGCTOCACA GAGAGCTGCA ACACCACCC
53401 AGAAGATGAG GACCTCAAAG GTAGGTGCTG GOCCTTGGAG GGGGAAGGAC
53451 TCCAGCAGTG ACCCAGGTAC CTGGCTCCA ATGGGGCAAC TGOCITTTCT
53501 GTCCOCGAA CTGGGAATGC TGGCTOCTAT GOCCTAGGA GAGGGCTTGG
53551 TATAAAAAGT ACTTTCAGG AGCCAAAGATA TGAGGCGOCT GTCTGGTGT
53601 CCTGAGTGG GCAAGAGGCT TCTCTCTT GACCCCAAGT CTAATAATAGC
53651 TAAGCTAAG ATTCCTCAGG GGCAGGGCT CAGAGAACCTG TCTCTGTG
53701 TGATAATGAT GTGCCATCCA AGAACAGGGG TACCCCAAGT CCTGCCGAA
53751 GTAGGCTGTA ATGCTATGTA GTCTAAATAA GAGTGACCAA TCACTCTGG
53801 TTTTCTCTGG ACACAGAACT TTGTTTTTA AGACTGTGAT GGGCAGGAG
53851 TGCTGGCTCA CAGCTTAAT ACCCAGAACT TTGGGAGGGC CAGGGCAGAA
53901 GGATTGCTG AGACCAAGGAG TTTGAGACAA GCTTGGGCAA CATAGCAAGA
53951 CCTTGTCTCT ATTTAAAAAAA AAAAATTAGG ACAAAATAAA TAGGCGAGGT
54001 GGGGTGACTC ACACCTGTAAC TCCACACT TTGGGAGGCC GAGGCAAGTG
54051 GATCACTTGA GGTCAAGGACT TCAAAACCCAG CCTGGCCAAC ATGATGAAAC
54101 CCCGTCCTCA CTAAAAATAC AAAAAGGC CGGGCGTAGT GGCTCACGCC
54151 TGTAAATCCA ACACCTGTAAC TCCACACT TTGGGAGGCC GAGGCAAGTG
54201 AGAAGTCAA GACCAAGCTG GCAACATGG TGAACACTCA TCTCTACTAA
54251 AAATATAAA AATTAGCCAG GTGTGGGCA GTGCTGTGTA ATGTTAGCTA
54301 CTCGGGAGGC GGAGGTGGGA GAAATGCTG AACCTGGGAG GTGGAGGTG
54351 CAGTGAGCG AGATCACCCCT ATGCACTCC AGCCCTGGCA ACAAGAGOGA
54401 AACITCTCTCT CAAAAAAATTTT AAAAATTTT AAAAATTAG CGGGGTGTGG
54451 TGGGGGGGTC CTGTAATCC ACCTACTGG GAGACTGAGG CATGAAAATG
54501 CCTGAAACC GGGAGGTGGA GTTGCAGTG AGCTGAGATT GCACCACTGC
54551 ACTCCAGCGT GGGTGACAGA GCGAGACTCT GTCTCAAGAA AAAAAAA
54601 AAAAATATAT ATATATATAT ATATATATAT ATATATATAA ATATAAAACC
54651 CAGATAGTCC TGGGAACACT GGATGAGT GTCTCACTCTA GTCTTAAGAT
54701 TTGGCCTGAA ATGATGGAGT TGGAACTAAT CTGACAAACGG TGAGGCCACA
54751 TTGGGTCTATG TCTGTTGGG CGCGTAAGGA CCACTAGCT AAGCTTGGC
54801 CTGGCTAGAG TGCCAGGGGG GTGGGAGGGC ATGGCAGGCT GGAGCCCCGG
54851 GAATCTCTGT CCTGCTCTT GATTTGGCCT CCTGGAAATTG CTCCTTTC

FIGURE 3R

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

54901 CTGAATTCAAG TAAGTGACCT TGGGCCAGGA CATCAGAAAA GACAGAGGAA
54951 CACTCTAGGA CAGAGCTGGG AGAGCATGOC CTGGGTGGCA AGGGGGCACC
55001 AAACCTTTG GAACCAAAAA AAATAGCAGA AAGCTGGAG GAAAGTGAATC
55051 ATAGTAGCTC CAGGCCCTTG TGAGTGAGGT CAGATCAGTT TTGAACTCGG
55101 CACTGCTGGC AACATAGGAG GOGCTGTAC TGTCTGGCTC TGACCCCTGT
55151 GGCCTGGCCC CCTGGAACAT CTTCGGGGGG ATCAGGGGTC CTGGACAGG
55201 CTGTTGTAAG GCTGCTCTGG AAGGCCACAGC CCAGGTCTGG GCACCTGCT
55251 GGTGOCCTCA GCTGGGAGGC CTCCTGGCA GAGGGGGGGG CTGGGAATGT
55301 CGTCCAGTGT CCACAGCAGC CTGAGGAGG GCGTCCCCCTT GCGGGGCTC
55351 TACAGGCCA TGGGCTGGG GCGTGTCTGG CTGCTGCTGCT CACCTGCGT
55401 GTTCTGTTG TTTGGCTGC TCTGCTTGC CCTGCOCTGC CCTGCOCTGG
55451 CTGGCTAATC GCGCCCTCC GCACCTGGAA TGGCAGCTCG GTGCGTGAAG
55501 GAGGGAGCTC CGGGGACAGA ACAGCCCCCT CTGCAGGCT CAGGCCCCAG
55551 CCTCTCTCT GCTCTCAGC CAGTAAAGTGT GAGGGAGGCA CATTCTGGCT
55601 TCGTCTCOC TGGCTCGTGC TGAAGCCCCCT CAGGGACOOC CACCACAGCT
55651 GTCAGTCCA CCCACCTGOC CGTGGTAGTA AGCTCTGGGA GCATGGCTC
55701 TGCTGGGGGT GGGGGTAGA CTGGAGGTGC TGTGAGACCC AGGCAGGGC
55751 CCCTGAGTCT GGGGCCAAA GAAATATGAG AAGTGTGGGT GGAAAACAT
55801 GGCCTGGGAT GAGGGAGTA GAAAGCCCCC AGGAATGTGCA GTGGGCTTGG
55851 CCTCAGGCGT GACCCAGGA GAAAGGGAGA GTGGAGAGTC AGGTCCTGG
55901 GGGTGGGAGT GGGATGATGG GGAATATGTC ACAGGGAGGA ACTGTGTGG
55951 CGATGTAGTG CTTCCTGAGT CTCACTATAA CAGTAAATAG AGCATGGGGT
56001 CAGAGGCCAAG ATAGATCTGA GTTAAATCC CAGCTACACT GCCTCAAGA
56051 GTGTGAAGTT TAACCTTCCA GACCTGCAGG TTCCCTATCT GTAAATGTGG
56101 AATAAAATGG CAAGCACCTC AGACCTTGT TAGATAAAAG ACAAGGCAGT
56151 AGGAAGTCCT GATACTGGTC CTGATGGGT TATCAGTACG TCATCTCAT
56201 ATTTCTAGT ACGCTGTGC TGGAGGATGC CTTCGCTGCTC TGCTTTCT
56251 CCCACCATCT ATCCCTGCAG AGTTCTAAG CACAAACCTC TTGCGGGCTG
56301 CGGCCCCAGT CAGGTCTAC AGATGGGTCT GTGGGGGTGT GAGAGGGTGT
56351 GTGTGTGTG GGTGACACCC TGCTGCTGC TTGAGGAAAGC CGATGAACT
56401 CCTGCTTCC CTTAACTGC TGCTGCTCA CCTGGAGCTG TGGCTAGCG
56451 GGGCTGAOGG CTGTTGGGOC CCTCTCTGGA TGTGCTTGTG CTCGCGCTGC
56501 CCTGTCCTAA CTGTCCTGCT TGGCTGTGCT CGGCGGGCTG CGCGTGTGG
56551 GTGCTGTCTT AACCTCTGCA GTTGTCTTGC AGCCTTTTGC TCTGTGAGG
56601 AAAGGGTGTG GGCCTGGCC CGCCAGGGC TGGGGTAGG ATGAGCCCCAA
56651 GCTCAACCCA AGCTCTCCCT TACCTGGTG CGACCCCTG CTGGTAGTGG
56701 CATTCCCTAT AACAGAGGCC CAAGGGGCA GGACATCAC AGCTGTCCCT
56751 TGGCTTTGGA TGGGTGGGG AGGAGGCTC TGAGGGCAC CACCTCTGOC
56801 TGCGCTGAG TCTGAGGCT GTCTGGTTT CCTGAGGAAC AGCTCTGGC
56851 AATGAGAGCT GTGTGAAAT GTGAGCTTT CCCAAGCCTC GAGAGGAAA
56901 TGGAGGAGCC TCTCTGGTAC AGCCTGTCOC AAGTTTTTAC AGTCTGGGA
56951 TCATTTCTCC CAGAAAAGOC CTGTTGGAGTT GAGCAGTGGG AAGCATCCAT
57001 OCTAGGGTTC TGATGGCTT TTGGCAACCCC AGCCTAGCT GGATTCTGCT
57051 GTCAGGCTAC CTGTCACCCA GGGCTGGGTC CTGGCCACTG AATGAGGGCT
57101 ACGAGTGGGG GTGGTGTATG AGACCTGACT GAGCCCCCTC AGGTGAGAGA
57151 AGTAAATTTGG GGGTGAAGC GGCTTATTG GGAGATGCTT GTGAGAGAGG
57201 CTGCTCATAC AGGGAGGGG CTACAGCAT TCAAGATGTA CCAGGCTCT
57251 CACCTGTAAAG AGGCAAGCGT GTTGTCTGCA ACCTGGTGTG TGATGAAAG
57301 GGAGGCAAAG GCCAAAGAAC CATAACTAAT GGCTGGGCTT CAGGAGAAAAG
57351 TGGTCATTTGT CTCTGAGAC TCCAGAGAGG GAGAOGGGAG GGAAGGTGTG
57401 TCGCTCTTC CTGCGCAAGGG CCTAGAGAC AGAGAAGAGG GATGCTTTG
57451 TCATAAGCGA TCACAGGGCA CTCTGAGGA CTGGGGAGGG CTCTCTGAA
57501 CTTGGGAGGT TCCCCAGTAG GTAAATTGAT GGATTCTTCTT CCCCCACAGT
57551 CGGAAAACAG GAGATCAITA AGAATTACAGA ACAGCTGATT GAAGOCATCA
57601 ACAATGGGA CTTTGAGGOC TACAGTAAAG TAGAGACCCA TTTTTTTTGT
57651 TGACCTAAGT CATCTOCAA GGCTTCCCT GCTTCAGAC AACAAATTAGG
57701 ACGCTGGGA AAGGGAGGT GGACCTTGGG CAAAGTATCT GAGTTAAGCC
57751 CTCTCTAAA CTGGAGGCC TTCCAGGTAG ATTCCTGAG CTCAACCATG
57801 GTATCCCTGGC AGTGGGCGA AAGCACAGGG CTGAGTGGCT CAGCAGGAG
57851 GGCCTGGAAAGA TCTTGTCTGT CTGAGTGGC ATGGCACAG GTAGCCCTGCT
57901 GCTACTGGAT AGACAOOGCT GATAAGGAAG GAGACAAAGT CACTCCATAG

FIGURE 3S

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

57951 AAGCCTGATA GGCTGCTTT TTTTTCTOC CTGTAGGAAG ATTTGTGATC
58001 CAGGCCACAC TTGCTTGTAG CCTGAGGCC CTGGTAACCT CGTGGAGGG
58051 ATGGATTTCC ATAAGTTTA CTTTGAGAAAT CGTGAGTGGG TTGCTGCTGC
58101 TGATATACCT CTGCTGCCCC CTTTACCCCT TTGCTCTCTG CTGCTGCTCA
58151 CCTCTCATC CCAGTGGGCC ACTTTTCCCT TATTTGACCT TCTGCTGCA
58201 CTCTACTCT GTATGCTTGT COCCCTGTGC COGATGGTT GTAGACAGGC
58251 ACCTTGAAG GCGCTGCTOC TGAGCTCCAA GTGOCATTC A TTCTGCACT
58301 GCTTTGAGC AGTCCAGTC ACCAACATCA AGCTCACCTA TTCTGCGG
58351 GGCGCGGTGG CTTAAGGCTG TAATCCAAAC ACTTTGGAG GCTGAGGCC
58401 GCGATCAGG AGGTCAAGG ATCGAGGCCA TCCCTGGCTAA CAOGGTGAAA
58451 CCCATCTCT ACTAAATAA CAAAAATTA CGGGGCTTG GTGGCAGTGC
58501 CTGTAAGTCCC AGCTACTCGG GTGCTGAGG CAGGAGAATG ATGTAACCT
58551 GGGAGGCGAGA GCTTGCAGTG AGCAAGATC AGGCCACTGC ACTCAGCT
58601 GGGCAACAGA GCAAGACTOC ATCTCAAAAAA AAAAGAAAAA ATTATTTAAG
58651 CCTCACTCT TTCAAGAAG GATTGGAAGG AAAACCTTTG AGATTAAGGTT
58701 GAGATGATCT CAGCACATAA GAACTAAGCT CTGCTGCTGC AGTTTCACA
58751 ATAGAGGAAA TTAAACCCAG GATAAGAATG TCCAAACCCAG GGCACGTG
58801 GTGATTGCG AGATGGAAG TTGTTGGCTAG AATCTTCTG ACTATGGAGG
58851 AAGGCAGAOG TCTTGTATAG GGGGTGGGGT GTACATTCTG GACAGTTGT
58901 GAAAAATAAG GGGATAAGAA GCTGAATCAT CACCCCTCC CATCTTCTC
58951 TCTGCTCTAT GAGACCTCC CCTTCCTAT TTTTATCTCT TCCACTTAA
59001 TCTGGGCTC TCCCTATCTT GCGCTGAGTT ATAGTTAGTC ACTAACTCT
59051 CGCTGGCTC CCACCTTAT CACATCTCAG CTACATATAT AAACCTCTG
59101 TTATCTAAGT AATTCTATTA GCGAGAAGCA ATTCAGAGT TTATAATTAGT
59151 ACTAGGAAGG TGTCTGTTAG CGCCCTGCTCA ACATTTGAAT TGAACTAAAA
59201 TGTGAATCTC AATAAAAGCA ACACAGTTT CACAGCATAT GCTGATAATG
59251 GCAATC2AAC TTCTTTGCG TTTTCCCCAG AGAAATCTGG GAATATCTG
59301 AGCTGGTGC TTTGATGATT CTATTCAGC TTGTTGGCT TAAAAAAAT
59351 TACAAATCAA TTTGAAATGG TTTAAGTCA TGATTTGTT CTGAGCCT
59401 AGCTAGGGGT GAGCCAAGOC TTATGAAATC TAAACTCAGC CTAACAGAAAT
59451 AGAAAATCTA TAGGCTTGTAG TTAAGAGTC CAGGGTCTG AGTCAGGTG
59501 TGTGATTGAG CCAAATTATT CCTTGAGCCT ATTCCTCAT CTATAATGA
59551 AGAAAATATT ATCCACCAAG AAATACAGCT CGGGCATGTA AAACCCAGC
59601 ACAATGCTG ATTAAAGCG CAGCAGGTAC TGTCACTGTT ACCCATCTT
59651 CTGTTCTTT TGGATAAAAGG AGACTAATGT AATGTGGCAT CCTGGCCTCT
59701 GGAGGGCGT CAGGGGTCTG GGGTGGGGGG GGGGCGGTAC TTGGAGATTC
59751 TGGCAGTGTG TGTCTGGAG ATGCTAAGAC TTGGAAGTGC AGCTGGAG
59801 GAAAATGCG AGTCCAGGCC CTGATGCTC CTAACTTAC CCACCCCTGCC
59851 CTGCACTCT GTCAGAAC AGCAAGCTA TCCATACCAC CACCTAAAC
59901 CCACACGTC ACGTGTATTGG GGAGGAOGCA GCGTGCATOG CCTACATCG
59951 CCTCACCCAG TACATGACG GCGAGGGTCTG CCTCGCACC AGCCAGTCAG
60001 AAGAGACCCCG GGTCTGGCAC CGTGGGGATG GCAAGTGGCT CAATGTCCAC
60051 TATCACTGCT CAGGGGCCCC TGGCGCAOG CTGCACTGAG CTCAGCCACA
60101 GGTGCACTG GTGAGGGGG GAGAGGGCT GGAAGGGCTT GGGATAGGTG
60151 GGGTCAGAGG AAGAGAGAA GCGTGGAGG TGTCCTCTGG AGAGGAGGTG
60201 TGGGCGCTC CAGAGGACTG GCAAAGCTG GCGAAATGGT TGCAATAAGT
60251 TATGCTTGG AATCAAGACAG ACTAGGGTCT GCGTCCGTGA CTCCAAATTG
60301 GATGACCTCA GACAGCTTAC TTCCCCCTCC TAAACTGTTT CCTTACGCTG
60351 CAAAGAAAGG CAGAGAGTGG TGCTTACCTC ATTTAATCAT TGTGAGGATT
60401 AAGTAAGATA CTATAAGTAA AGCACCTAGT TAGTGCTTAG CAAATGGAG
60451 CGAGTTTGT ATTTAAGCAT TAGCTTCACC CACTTTCCTCC ACCTTCTCAG
60501 CGCGACTTGG CCATGTGTTT AGCGTGTAA AGTGGCTGGA ACTCATCTG
60551 GTGCTCAITG TCTCTGCTC TGTCTACCTA TTCTGCTCTG TTGACAGGG
60601 CCTTCTAGGAG ATTCCAGCCG GAGGCTAAC CCTCGCAGCC AGTGGCTCTG
60651 GAGGGCGTGA GTGACAGCGG CAGTCTGTT TGTGGAGGT TTAAACAAAT
60701 TCAATTACAA AAGGGCAGC AGCAATGCA CGCCCTGCA TGCAGCCCTC
60751 CGCGCGCCCG TTGCTGCTG TCTCTGCTG ACAGGAGGTG TTTTACATT
60801 TAAGAAAAA AAAAGAGAA AAAAGATGTT TTAAAAAAA AAGGAATCCA
60851 TACCATGATG CGTTTAAAAA CCACCGACAG CCCTTGGGT GCGAAGAAGG
60901 CAGGAGTATG TATGAGGTCC ATCTGGCAT GAGCAGTGGC TCAOCACCG
60951 GCGCTGAGA GGTGAGCTTG GCGCTCTCTGG TCCCGATGGA CTTAGGGGG

FIGURE 3T

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

61001 CCAGGCAAGA ACTCTGACAG AGCTTTGGGG GCGGTGATGT GATTGCAGCT
61051 OCTGAGGTGG OCTGCCTAAC CCAGGTCTAG GAATGAACIT CTTTGGAACT
61101 TGCATAGGCG OCTAGAATGG GGCTGTGAG AACATGTGA CCATCAGACC
61151 TACTTGGGAG AGAACCGAGA GCTCCAGAC TGCCTGAGGAG GCAGCTGAGA
61201 AGTGGTGGCC TCAGGACTGA GAGCCGGAC GTTGCCTGTAC TGTCCTTGT
61251 AGTGTAGAAG GGAAGAGAAT TGGTGTGCA GAAGTGTACCG CGCCATGAAG
61301 CGGATGAGAA ACCTCTGTGTT AGTCTGACAT GCACTCACTC ATCCATTCT
61351 ATAGGATGCA CAATGCTATGT GGGCCCTAAT ATTGAGGCCT TATGCCCTGCA
61401 GCTAGGAGCG GGAGGGGTTG TTGCTGCCTT GCCTCGTGT TTCTCTAAC
61451 CTGGCAAGGA GACAGOCAGG CCTGGTCAG GGCTCCGGCG COGCGTTGG
61501 CGGTTCTGT TCTGIGCTGA TCTGGACCAT CTTTGTCTG CCTTTCACG
61551 GTAGTGGTCC CCTATGTCAC CCTCATCTGG GCCTGGGCCC TCTGCCAAGT
61601 GCGGCTGTGG GATGGGAGGA GTGAGGGCAGT GGGAGAAGAG GTGGTGGTGG
61651 TTCTATGCA TTCAAGCTGC CTTTGGGCT GCCTCCCTC TTATTCTTCC
61701 TTGCTGCAOG TCCATCTCTT TTCTGTCTT TGAGATGTAC CTGACTGCTC
61751 TCGCAAGAAG AAGAGGTGTC CCTACAGAGG CCTCTTACT GACCAACTGA
61801 AGTATAGACT TACTGCTGGA CAATGCTGCAT GGGCATCAAC CCTOOCOGCA
61851 TGTAAACCAA AAGAGGTGTC CAGAGCCAAG GCCTCTAACCT TCATTGTC
61901 TCTCTGTGCT CAAGGAGTTC CAITCCAGGA GGAAGAGATC TATAACCTAA
61951 GCAGATAGCA AAGAAGATAA TGGAGGAGCA ATTGGTCATG GCCTTGGTT
62001 CCCTAAACAA AAOCTGCGAT ATTATATCTGC ACAAAACATCT CCACCTTGG
62051 GGAAAGGTG GGTAGATTCC AGTCCCTGG ACTACCTTCA GGAGGCAOGA
62101 GAGCTGGGAG AAGAGGGAAA GCTACAGGIT TACTTGGGAG CCAGCTGAGA
62151 AGAGAGCAGA CTCACAGGTG CTGGTGTG GATTTAGCCA GGCTOCTCOG
62201 AGCACCTCAT GCATGTCOCA GCGGCTGGGC CCTAGCCCT TCTGCCCTG
62251 CAGTCTGCAG TGCGAGCAOG CAAATCCCTT CACCACAGGG TTTCGTTTG
62301 CTGGCTGAA GACAAATGGT CTAGAATTTC ATTGAGACCC ATAGCTTCAT
62351 ATGGCTGCTC CAGCCCCACT TCTTAGCATT CTACTCTC TTCTGGGCT
62401 AATGTCAGCA TCTATAGACA ATAGACTATT AAAAATCAC CTTTAAACA
62451 AGAAACGAA GGCATTGAT GCAGAATTTC TGCAATGACAA CATAGAAATA
62501 ATTAAAAAT AGTGTGTTCTGATGTTG GTAGACCCCT CATAGCTTGG
62551 TTACAATGAA ACCITGAAC GAAAATATTAA AATAAAATAA CCTTTAAACA
62601 GTCCATTGIG TTACTGCTGT TGGAGGTTA CGGCCAGAGG CGTAGAATT
62651 AGCAGCCCTGG GTTACCCAGGT TGGAGAGAGT ACTCTCCCT ACTCCCTTGG
62701 GGTACTTTTG AGAATAAAAC TTCTCACTGC CTGTAATCCC AGTACTTTGG
62751 GAGGCGAGG CGGGCGAATC ACGAGGTGAG GAGTGGAGA CCAGGCTGGC
62801 TAAT (SEQ ID NO:3)

FEATURES:

Exon: 1690-1694
Intron: 1695-2000
Exon: 2001-2095
Intron: 2096-14208
Exon: 14209-14268
Intron: 14269-21854
Exon: 21855-21909
Intron: 21910-22781
Exon: 22782-22847
Intron: 22848-25768
Exon: 25769-25841
Intron: 25842-25986
Exon: 25987-26089
Intron: 26090-26492
Exon: 26493-26576
Intron: 26577-27019
Exon: 27020-27114
Intron: 27115-27753
Exon: 27754-27876
Intron: 27877-32559

FIGURE 3U

REPLACEMENT SHEET
 Docket No.: CL001158DIV2
 Serial No.: 10/623,505
 Inventors: Jane YE et al.
 Title: ISOLATED HUMAN KINASE...

Exon: 32560-32643
 Intron: 32644-32889
 Exon: 32890-32932
 Intron: 32933-35499
 Exon: 35500-35562
 Intron: 35563-37589
 Exon: 37590-37633
 Intron: 37634-46979
 Exon: 46980-47012
 Intron: 47013-51017
 Exon: 51018-51062
 Intron: 51063-53371
 Exon: 53372-53420
 Intron: 53421-55458
 Exon: 55459-55572
 Intron: 55573-57549
 Exon: 57550-57625
 Intron: 57626-57986
 Exon: 57987-58081
 Intron: 58082-59856
 Exon: 59857-60086

CHROMOSOME MAP POSITION:
 Chromosome 10

ALLELIC VARIANTS (SNPs):

DNA			
Position	Major	Minor	Domain
1603	G	A	Beyond ORF(5')
8632	T	-	Intron
19366	G	A	Intron
23770	T	C	Intron
31013	A	T G	Intron
33206	T	A	Intron
33263	G	A	Intron
33859	C	A	Intron
37254	T	C	Intron
40809	C	A	Intron
41025	T	C	Intron
42232	T	C	Intron
50477	G	A	Intron
55352	A	G	Intron
55914	A	G	Intron
56633	G	A	Intron

Context:

DNA

Position	Sequence
1603	ACCCCCACCCGCGGCGCGACCCCGGCCACTGCAGGCCCCCGGCCCCCGCCCCCCCCAGAGCTTTGAGAGCTCAGAGTGGCAGGCTCCGTTTCAAGGGGAGCTCAAGGAAAATAGCATGCGAAGGGGAGTTCTTGTATGTCAGCTGTCAGCTCTCTTCCCTGCTGTCAGTTGAGCGGGGATGAGATGAAACCGCCGTCGGGGGGTTTGAGCTCACTTGCCCCATGGTGAAGGAGATTCTCTTCAAGGGGATGATAACCTCTTTTAATCTTCTTCCCCGACCTTCA[G,A]CTGTTCTGCTGAGAGAAGGGCAGGGCTCTCTGCTCCCTCTGCCCCGGGCTCTGGCCGAGGACGGGCTGAGATGCGAGCAGGTTGTTTCAGCATGGCCACCGCTCTGAGTGTGCAAGCTGAGGGTGGAGGCTGTTGAGCTTGGCCAGGGACTGGATGAGGGGGTGGAGGCGGAGCGCAACCCACATCTGTTCTGAGTGTGCTGGGGGGGGTCCCTTTCAGCT

FIGURE 3V

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

ATGTTGGATGGTGGTGGCACAGOGOOGGTGTGTGTCAATGTAOGTGAGTGACTAGAG (SEQ ID NO:5)

8632 GAOOGGOGCCCTGCTGCTTGGAAAGAAGATGAAAGGCACTCAGGAGGGCAGCAAGTGAG GOOGCCTCCATGGAGGCCCTGAAATCAGTGGGTGCAAGGAGTTCTCACATCCATGTT TAGGGTCATAGGCCACAGACCTGCAAAATAACCTTTCGAAAGTTAAGAAATGTCCTTGAGAT TGGAACTTGGGAGAGTCCTCAGTCAGAGTAGGAATGTGCACTCTTCCCAGTACAGAGG ATTTGATGTTAOGTGGCAGCAGGATCTTATTGAGCTAGTGCTGGCATTTGIGTTTTT [T,-] TTGAGAAAATGTCACTAAGTCAGCAGGCCATCCTGAGAGGGCCATGGAAATCTG TGCCAGCOCCTCCCTGCGGCCCTGACCTGGAGAGGAAGGGCACTGGAGTAGGCT TCTGTCTTCAGGCCAGGGGGAGGTGGTCAAGGGCAGGCTGGTCAACOCCTGGCTG CAACCTATCACCTCCCTATCTCTTCTCTGCTCCCTGGTCACTGGTCACT TCTTGCTGCCCTCCGTGAAATGTCAGCACCTGGACCAAGTCTGAAGCAGCTGGCA (SEQ ID NO:6)

19366 CTCAGGAGGCTGAGACAGGAGATGGCTCAAGAACAGGATCTCCAGGCCAGAGCTGGCAAC ATAGTCAGACCCCTGTCCTTAAAGAAATAATGAAATCTGCTGTTGCTAAATAG GCACTTAGAAATGGCACAGTCATTTCTCTCTGTCAGTGCTCTGTTAATTCTTAC AAATTAAGAAATGTCGATAGCAGTCCTAATCAGATACAGCTTCTCAGTCCATCCCTGCTG CTGGCAGGTGCCCTGCTCTGGGACACATCAAAGCTGTTCTCTGCTGGTGGGCTA [G, A] AAGGAAATTAGTCCTTCTGCTCTCTTCTCTAAATTCCCTTOCCCGCTTCTCAGCAC CTGGGCTCTGTTGTCGCTCTGGAGAAGGGCAGAOGCCAATGACTCAGTGCTAGGC AGAGGCTGGGTGCTGCACTCTGOCCTGTCCTGGCTCTGCTGCTGGCTGGGGGCC AGGGTGGTGTGGGCATGGGTGGTGTGGCAATGGGTGGGTTCTGGCTGAGGCAAGG CTCACTGOCAGGCCAGGCAAGCTGAGTGCTOCACCTCTGAGATGGTGTCAAGCAT (SEQ ID NO:7)

23770 CCCCCCTCTGCCCTTTCTTCTTCTGACAATTCTGGTGTGCTCAAGAACACTGTGCTGAG GCTCTGGCATGATGACAGAGGTGAGAAGACATGGTTCTGCTCTGAGGGAGTGGAGAGTT CTGGGCTGATAATGCAACCATAGAGOCOCGGGAGCTTCAAGCTCTGTCACCTGTCCT AGACCAOCATGACCAAGCCTTGCGTGGGGCTCTCCAACCTTGAGGAOCGTTCCOCGGCCA CATGCTCAGCCTCTGCCCTCCCTGGAAATCCCTGGTGCCTCCCTCACCCACGCTCTCAGG [T, C] GCTCTGTTAGCCTGCTTCCOCCTTGGCTCTTCCOCACCTTGCTTTCTGAGGGT GATGTCOCTACAACTCTGTTGATCATCTGCTGCACTTATCTGCTTAACTGGCAG CTCTGGCTGCTCTGGAGAGTGGGGAGTCAGCTTCTGAGGAAATTCTCAACCTTGAG AGCCAATGTTGCTGATCAACATCAGATGCTTCAGOCCTGGGAAGAAATTCTCAAGTGG GAGATGAAATTCCAGTGGCAGCAGGGAGGGAGGCTCTGGACGGAGGGAGCAGTGATG (SEQ ID NO:8)

31013 TCAGGAGGGTGGCTCACACCTGTAGTOCCAGCACCTGGAGAACGGGTAGGTAGATC ACTTGAGCOCGGAAAGTTTGAGACCAAGCTGGCAACATGGAAAACCCATCTCTACAAA AAAAATTAACCTTAAATTAACCTGTTGTTGTTAAGCTGGCTTACGCTACTTGGAGGCTGA GATGAGAGGATCACTGAGCTAGAGAGGTGGAGTTGCACTAAGCCATTATGTCAC TGCACTOCAGCTGGCAACAGAGTGGAGATGCTGTTCAAAAAAAATTTTTT [A, T, G] TTAAAGGAGAGCTTAACCTAACTATGAGAAGAAATCTAGTOCAGAGGAAAGAGTGTGA AGATCCTTGCTAATTGAGGAACCAAAGGTTGGACAGCAGAAAAGAGAGGGGCTCTG AGCCAAGGGCAGGGGCTCACTGGGGGATGACCATGATCCOCCTGAGACTCTTAAATGTT GTGAGGGCAGGTGAAGATGGCTGTGAGTGGAACTGTCAGCTGAAAGGGGCTTCTGCTG ATGACCTCTCATTTGCTTTGGAGAAATTACACGGAGGGAGGCTAAATGAGAGACT (SEQ ID NO:9)

33206 CCATGCTTGTCTCCAGGAACCTCTCAGGTATGTTTOCCAGCTGCTGACTTTGATTATGC CGAGGTGAGTGGATCAGGAATGGCTGTTGCACTCCGGCACCGCTGGGTTCTOCCG CTGCTGGGCCACACCTTGACCAAGGGGAGCTGAGGATCTGTTGAGGGCTGCTGCTGC TGGTGGCTGCTGAGGATCTGAGGATCTGAGGCTGAGGATCTGTTGAGGGCTGCTGCTGC AACTTCCCAAGGAGTAGCTGCACTTGCACCTTGCTATGTAACCTGTTCTCTGATTCTTAAAT [T, A] AACTCTCTGAAGACTCTCAGCACTTACAGAATTAGCCATTCTAGGATCTGGAGGATG TGGTGGGGAGAAAAGAGAGATGAGGATACAGTGAGTCCTCTCAATTGOCAAATTGCCAC CAATCAATTGCTGCTGGGAAGATCTCTTACCTTCAATTGCTCAAGTGGAGAGTACTAAT AGAAATTAACTCCAGATGTTAAACCTTTGIGGGACCTGTCATTTAAATAGTCCTGAG ATACTAGCTATAACAGTGAAGAATAAAAGACOACAGGGAGAGGGAAAGGAGACTTGCTT (SEQ ID NO:10)

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

33263 TGGCGAGGTGAGTGGATCAGGAATGGGCTGTTGCCATCCCCGGCACCGCTGGGTTTCTCG
GGGCTCTGGGOCACACCTTGACCAGGGGAGTGAGGATCTGTTTGAGGGCTGCTGC
TGCCTGAGTCTGCTGAGATTCAAGGGCTGGACTCACATTGGAATTGTTCC
TAGAAGCTTCCAGGAGTAGGCCTGCCAACCTTGCTATGTAACCTTGTTCTCCTGGGATTCT
ATTAACTCTGAAGACTCTCAGCACATTACAGATTAGCCATTCTAGGATCTGGAG
[G, A]
ATGCTGGGGGAGAAAAGAGAGATCAGGTACAGTGAGTCCTCTCAATTGCCAAATTGC
CACCATCTTGCCTGCTGGAGATCTCTTACCTTCAATTGCTCAAGTGAGATGACT
AATAGAAATTATTCAGATGTTAAACCTTTGTTGGGAGCTTGCTTAAGATAGTCCCT
GAGATAGCTATAACAGTGAAGAAATAAACAGCAGCAGAGAGAGGGAAAGGAACCTG
CTTAAATTGCTAAAGAATTGGGAGGGTGGGACCAATAATTGTAATCTACTTGAC

(SEQ ID NO:11)

33859 TTGACATTTATTAAAGATGCAAGACACTOCACTTCCCTTGCCCCAACCTCACCC
AACCCCTATTATGTTGCTTCATTTGGAGACAGCTGGCTTTTGAGGGAAAGA
TTAATGCTGAGACTGAGACAGAGAGGGCTTGCCAGCTGCCATCTCCCCGGCTCTC
CTCTCCCTCTAAACCTTGCCTACTGTTGTTCAAGAACCCCCCTCTCTTCCATA
ATAAGACTCCCTCCCTTGCTTCCCTCTGCCAACACATGGAAAGGGGTGTTGGGAGC
[C, A]
TAAGCCACCACTCAGTGGGACCCACTCTCTGAATAACCGTCTGCTGGCTGCGCT
GGCTCCAGGTAACGCCAGGGCCCTGGCTGTGAGGATGCTCCAGGCAAGGGCTAGGGCT
TGGTGGTGTAGGCTGAGAGOCATGGAGCTGCCAGGGCTGGATAGTGAGGCG
GGCTGGTGTGGOCTGCOCTAGGCTCTCCTCTGAACTGTTGGGCTTGATCTTGT
GTCATGGGTACCCACCAOGCCATACTGTTGTTGGCTCCACCTCTGAGATGGGAACA

(SEQ ID NO:12)

37254 CATTATTCTGCCAGTCTCTGCTCACAGGTACAGAGAGTGGACACTGGGGAAAGGGT
GGCAGCTAGGAOCAGTGAACCTGGTGAGGAGCTGCTCAGTGAAGGCTTCAACCCCCCTGG
CAAAACOCTCTGTAAGGTGGTCTGGTTCTGTTCTGTCAGTCTGTCAGTCTGGTCTC
CTGTCAGACTGTGACACTCTGCTCTGAGAACACTCAGGAGATGCTTGCACTCTGC
AGTTTGGCATCAGAGAACCTCCATGGCAACTAGGGATGGAGGCCACTCTTCAACCC
[T, C]
GGCACTCTGCTTCAAGGCTGGTGGAGCTGCAAGGCAAGAGTCCCGAGTGGGGCAGG
CGCTCCAGTACTGCACTGGTTCTCTCTAAGTGCTGCACTGCCATGCCCTCTCCAC
GCCAGGGAGATCTGAGGTGCCAACCTGAGGGCTCTGACCCACTCAAGATCCCCCTCT
GCTGAGAGGCTATAGGAAGTGCCTCTTGGGGTTTGGGAGACCCCTGGCCOCCTGT
CACACACGACTCTCTGTTGAGATCTGGCTGCCAGCTTCAGGTTGGGAGGGTACAA

(SEQ ID NO:13)

40809 GTGGCAAAGGAAACAGAGGAAGGACAGAGAGGTAGGGGAAAAGAGAAATGTCAGAG
CTCCAGCTCTTCAAGAACCTGAGGATGAGGGCTGGGAGACACATCTTGGTAAAGG
CTTAAATGAGGAOGTGOGTGGGAACTAGGCTGCAATGTTGTTGTCAGACCTG
ATATGCTCAGTAATGAGTTTATCCACATTCTTCAAGAACAGCTTCAATAATCA
TGGTGGGAACAGAGGCAATGATCACCCAAAATAAAGGCCAACGGTAACTGGCAGC
[C, A]
GTTGTGATGGGGGGTTAATTTTATGAAAGAGTTCTGTCAGAACATAACCCCTCT
TAAAACCCAGTAGAACGCTGGGCTGGCTCAACCTGTAATCCAGCATTGGGAGG
CCGAGGGGGTGGATCAOGAGGTCAAGGAGATGAGAACATCTGGCTAACGGTGAAC
CCCATCTCTACTGAAATAACAAAAAATAGGGGTTGGGGAGACCCCTGGCCOCCTGT
AGCTACTTGGGAGGTGAGGCAGGAGATGGGTGAACCGGGAGGGAGCTGAGTG

(SEQ ID NO:14)

41025 TTGAGAAAAGAGCTCAATACTGTTGGAAACCGAGGCCAATGATCACCCAAAATTA
AAAGGCCAACCGCTTATGCGGGTGTGATGGGAGGGTTAATTTTATTGAAAG
AGTTTCTGTCAGAACATAACCCCTTAAACCCAGTAGAACGCTGGGAGTGGCTCAG
CTGTAATCCAGCATTGGAGGCGAGGGGGTGGATCAOGAGGTCAAGGAGATGAG
ACCATCTGGCTAACGGTGAACCCCATCTCTACTGAAATAACAAAAAATAGGG
[T, C]
GTTGGTGGCAGGGGGCTGTAGTCCAGCTACTTGGGAGGTGAGGCAGGAGATGGGTGA
ACCOGGGGAGGGAGCTGCACTGAGCTGAGGTTGTCAGTGAACCTGCACTCCATCTGGGTA
CAAGAGCAAGACTCGCTCAAAAAAAAAAAAAACCCAGTAGAGATAGG
TAGGTGTTGGTGGCTCACATCTGTAATCCAGCACTTGGGATGCTGAGGTGGCTGATCA
CTTGAGGCCAGGAGTGGAGACAGGCCATGGTGAACCCCTCTCTACTAA

(SEQ ID NO:15)

FIGURE 3X

REPLACEMENT SHEET

Docket No.: CL001158DIV2

Serial No.: 10/623,505

Inventors: Jane YE et al.

Title: ISOLATED HUMAN KINASE...

42232 GGAAAOGTAGTGAGACCCCCATCTCTTAAAAAATTTAGCTGAGTGTTGGTGG
AAOGTGOCTGTAGTCCAGCTACTTGGGAGGTGAGGTGGGAGGAATGCTTGAGCAGG
AGGCTGAGGTACAGCAGGATCACACCACTGCGCTCAGCCTGGGTGACAGAGTGAGGC
TCIGTTTAAAAAAGAGAGAGAGAGAAAAAGAATGGAGACAAATTGAAA
AGCCAGTAAGGAGCCAGACACAGTGGTGGTACCTATAGTCCCAGCTACTCAGGAGGCTG
[T, C]
CGCAGGACAGAAATGCTTGAGGCCAGGAATTGGAGGOCAGCTGGGCAACATAGTGAGACC
CCCAACTCTTAAAAAATGTTTAAATTAAATAAAAGATTTTAAACCCAGTAA
TGACTAAATAATTATGGGAAATCTACTTAATAACATATTCAAAGTTATTAAATTTCATG
ACCGTAGGGATAATTAAAGTGAAGAAATAAGTCCAGAAATGTTTATATTAAAGTGAAGGA
AGTGGTATATAAAGGAGTACAGACAAGCCAGGCAOGGTGGCTCACGCTGTAACTCCAGC

(SEQ ID NO:16)

50477 TTGGGACCTGAACATCGTTCTGGAGGCCCCCTTGTAACAACTGCTCAGCTCTCTT
TGCAAAGCAGAACAGGAAAGAGGGCTGGGTOCCCACCTCTGGATGGTGGTGGT
CCAGGCTCTGGAGTGGCTCATGCTGGCTAAGTTCTCTGGCTCTOCAGGGGTTCTG
TGTGCTCTGGAGGTOCCTGCTAGTGGTGGCTAACTAGAGAGTCAGCAGGGGGTGAC
TGAAAAGAGGGAGAGGTGATGTTGGCTGCTACTCCCTCTTGCGGAACCTCATACCAC
[G, A]
TGAGTGGGGGGTGGGOCACGAACTAGGGAAAGCAGAAGGGGGGGAGTGCGCAGCT
CTCTGGCTCAGCTCTGAGGGGOCCTGTCCTGGCTCTCTCTGGAGACCTCATTC
TTCTGCGCATGTCCTGCTCACACATTCCCGTGTGAAAGCTGTGGGGGGGGGGGG
CTGTCGCGCTCAGTCCACAGCTCTCTAGTGTACCTGCGGCGTGGGAAACCCATGTGAA
AGAGCGCTCAGAACCTGACAGGAATCAGGACAGAGGCGCTTGCTGTCAGCTCTGGCA

(SEQ ID NO:17)

55352 TAGTAGCTCCAGGCGCCCTGTGAGTGAGGTCAAGTCAGTTTGAATTGGCACTGCTGGCA
ACATAGGAGGCGCTGTCACTCTCTGGCTCAGGAACTGTGGGCTGGGCGCTGGGCGCT
TTCCCCGGGATCAGGGGCTTGGACAGGCTGTTGTAAGGCTGCTCTGGAGACCCACAGCC
CAGGTCTGGGCACTGCGTGGTGGCTCAGCTGGGAGGCGCTCTGGCAGAGGGGGCG
GTGGGATGCGTGCAGTGGTGGCTCACAGCGACCTGAGGGAGGGCGCTGGCGCTCT
[A, G]
CAGCGOCATGGGCTGGGGCTGTCCTGGCTTGCTCGCTCACCTGCGCTGTCCTGTTGTT
TTGGCTGCTCTGGCTTGCGCTGCGCTGCGCTGGCTGGCTAGCTGCGCTGGCGCTCGC
ACTGGGAATGGCAGCTGGTGGCTGAAGGAOGGGAGCTGGGAGACAAACASCGGGCTCT
GCAGGCATGCAGGG
TTCTGGCTTGGCTCGCTGGCTGCGCTGAAGGCGCTCAGGGAGGCTGAGCTGAGGAGG
AGTCTTGAACGGTGCCTGCGTGGTGAAGTGTGAGCTGAGCTGAGCTGAGCTGAGGAGT

(SEQ ID NO:18)

55914 CTCGCTCTGAAGCCCCCTCAGGGAAACCCACACGCTGTCAGTOCCACCCACCTGGCGCT
GGTAGTAAGCTCTGGAGCACTGGCTCTGCTGGGGGTAGACTCGAGGTGCTGT
TGAGACCGGCAAGGG
AAAACATGGCTGGGATGAGGGAGTGAAGAAATGAGAAGTGTGGCTGCGCTGGGCGCT
CACCGCTGACCCAGGAAGAACGGCAGAGTGGAGTCAGGCTGTTGGGGGTGGGAGCTGG
[A, G]
TGATGGGAAATGTCAGACAGOGAGGAACGTGTTGGGATGAGTGTGCTCTGAGTCCTCA
GCATAACAGTATAAGAGCATGGGCTAGAGGCAAGAGATAGATCTGAGTTAAATCCAGC
TACACTGCGCTCAAGAGTGTGAGTTAACCTCCAGAGCTGCGAGGTGCTTCTGAA
TGTGAAATAAAATGGCAOGCAGCCTCAGAGCTGTTAGATAAAAGACAAGGAGTAGGA
AGTCTTGAACGGTGCCTGCGTGGTGAAGTGTGAGCTGAGCTGAGCTGAGCTGAGGAGT

(SEQ ID NO:19)

56633 TGGGGTTGGAGAGGGTGTTGTTGTTGGGTCGACACACTGGCTGCTGCTTGGAGCG
ATCGAACCTCTGCTTGGCTTAACTCTGCTGCTTGGCTCACCTGGACCTGCGCTAGGG
GCTGAGGGCTGTCGG
GTCCTGCTGGCTGTCGG
TGCTTGGCAGGCTTGGCTGCTGCTGAGGAAAGGGTGTGCGCTGGGGGGGGGGGGGGGG
[G, A]
GGTAGGGATGAGGCCAAGCTCAACCCAAAGCTCTGGCTAACCTGGCAGGGGGGGGGGG
GTAGTGGCATTOCTATAAGAGAAGGCGATGCGGAGGACATCACCAGCTGTCCTGG
CTTGAGGGTGG
GAGGG
CAGCTTCCCAAGCGCTGAGGAGGTAATGGAGCGACGCTGCTGGCAATGAGAGCTGGTGTGAAATGTG

(SEQ ID NO:20)